

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.03 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|-----|----|------|-----------|----|--------|-------|-----|------------|---|-----------|-------------|--------|--------|
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 7,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 8,86 | | |
| 1495 | 1 | 0 | In | 3,38 | | mm | ,00 | 37,70 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 94,33 | | |
| 1497 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 24,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 97,18 | | |
| 254 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,20 | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 15,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 8,55 | | |
| 2772 | 1+1/2 | 1 | In | | | mm | ,00 | 2,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,56 | | |
| 1077 | 1/2 | 0 | In | | | mm | ,00 | 15,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 1,80 | | |
| 1079 | 1 | 0 | In | | | mm | ,00 | 7,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,10 | | |
| 1081 | 1+1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 4,00 | | |
| 1275 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,30 | | |
| 4429 | 1+1/2 | 1 | In | | | mm | ,00 | 1,00 | NR | 202 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,10 | | |
| 4567 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,12 | | |
| 4569 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,25 | | |
| M Erection | | | | | | | | | | | | Total Kg: | 222,35 | | |
| SX1 | SULPHUREX GH/F | | | | 01101 - 0 | | | | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 222,35 | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01101 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|-------------|----------|-----------|---|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.04 | | | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | |
| 1495 | 1 | 0 | In | 3,38 | | mm | ,00 | 37,90 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 94,83 | | | | | | | | |
| 1497 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 24,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 97,18 | | | | | | | | |
| 254 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,20 | | | | | | | | |
| 2772 | 1+1/2 | 1 | In | | | mm | ,00 | 4,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 5,12 | | | | | | | | |
| 4675 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 202 | Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,28 | | | | | | | | |
| 1079 | 1 | 0 | In | | | mm | ,00 | 7,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,10 | | | | | | | | |
| 1081 | 1+1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 4,00 | | | | | | | | |
| 1171 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 202 | Plug Hex. TA 50.7/2 THRD-M NPT Forged ASTM A 105 Galvanized | | 1,40 | | | | | | | | |
| 4429 | 1+1/2 | 1 | In | | | mm | ,00 | 1,00 | NR | 202 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,10 | | | | | | | | |
| 4569 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,25 | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 209,46 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 01102 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 209,46 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01102 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.04 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 0,13 | | | | | | | | | | |
| 1495 | 1 | 0 | In | 3,38 | | mm | ,00 | 24,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 60,05 | | | | | | | | | | |
| 254 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 4,40 | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 11,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 6,27 | | | | | | | | | | |
| 1079 | 1 | 0 | In | | | mm | ,00 | 8,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,40 | | | | | | | | | | |
| 4567 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,12 | | | | | | | | | | |
| 4569 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,25 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 73,62 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 01103 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 73,62 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01103 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----|-------|--|--|-----------|-----------|----------|-------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.04 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | | | | | | 0,13 | | | | | |
| 1495 | 1 | 0 | In | 3,38 | | mm | ,00 | 24,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | | | | | | 60,05 | | | | | |
| 254 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | | | | | 4,40 | | | | | |
| 4567 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | | | | | 0,12 | | | | | |
| 4569 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | | | | | 0,25 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 64,95 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01104 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 64,95 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01104 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.05 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1495 | 1 | 0 | In | 3,38 | | mm | ,00 | 35,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 87,58 | | | | | | | | | | | | | | |
| 254 | 1 | 0 | In | | | mm | ,00 | 3,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 3,30 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 7,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 3,99 | | | | | | | | | | | | | | |
| 1079 | 1 | 0 | In | | | mm | ,00 | 6,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 1,80 | | | | | | | | | | | | | | |
| 4569 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,25 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 96,92 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01105 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 96,92 | | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01105 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.05 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1495 | 1 | 0 | In | 3,38 | | mm | ,00 | 35,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 87,58 | | | | | | | | | | | | |
| 3161 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 202 | Valve Plug ST.46093/1 THRD-F NPT PN 10 Cast DUCTILE IRON M 58 | | 20,00 | | | | | | | | | | | | |
| 254 | 1 | 0 | In | | | mm | ,00 | 3,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 3,30 | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 4,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,28 | | | | | | | | | | | | |
| 1079 | 1 | 0 | In | | | mm | ,00 | 6,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 1,80 | | | | | | | | | | | | |
| 4569 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,25 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 115,21 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01106 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 115,21 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01106 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|-----------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.05 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01111 - 0 | | SX1 | | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-------|----------------|--------------|-------|-----------------------|--------|
| KV_16.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01111 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.05 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 8,96 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01112 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 8,96 | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| TV_16.4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01112 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.05 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 8,96 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01114 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 8,96 | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|--------|
| TV_16.1 | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01114 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|--|------------------|--|-----------|-------------|------------|--------|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.47.06 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | 7,59 | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | 0,80 | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | 0,57 | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 8,96 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01115 - 0 | | | | SX1 | SX1 | | 1 / 1 | | TOTAL Kg: | | 8,96 | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| TV_16.2 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01115 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|-------|----------|--|-------------|-------------|----------|--------|-----------|------------|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
| PUMA5 | | | | 13/04/2010 11.47.06 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | 7,59 | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | 0,80 | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | 0,57 | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 8,96 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01116 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 8,96 | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|--------|
| TV_16.3 | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01116 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.06 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01117 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_16.7 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01117 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.06 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01118 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| AV_14.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01118 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.06 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01121 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-------|----------------|--------------|-------|-----------------------|--------|
| TV_11.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01121 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.06 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01122 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_11.3 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01122 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.06 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01123 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|--------|
| KV_11.4 | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01123 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.07 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01124 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_11.5 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01124 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.07 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 01125 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_11.6 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01125 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.07 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01127 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_11.8 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01127 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.07 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01131 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|--------|
| KV_11.2 | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01131 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.07 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01133 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|--------|
| KV_11.11 | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01133 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.07 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01134 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_11.12 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01134 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.07 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01137 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_11.18 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01137 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.07 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01138 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_11.19 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01138 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|--------|--|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.07 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01139 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 9,26 | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|--------|
| KV_11.9 | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01139 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|--------|--|--|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.08 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01140 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | | | |

| | | | | | | | |
|-----------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_11.10B | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01140 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.08 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01141 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|-----------|------------------|-------|----------------|--------------|-------|-----------------------|--------|
| KV_11.10A | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01141 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|--|-------|--|-----------|-----------|-------------|--|----------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.08 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | | 7,59 | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | 0,80 | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | 0,57 | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 8,96 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01142 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 8,96 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01142 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.08 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01143 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | |

| | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_11.1A | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01143 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.08 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01144 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|--------|
| KV_11.1B | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01144 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|--------|--|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.08 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01145 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 9,26 | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|--------|
| KV_12.2 | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01145 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | SKETCHES MATERIAL LIST | | | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|---------------------|------------------------|----|----------------|----|----|--------|----------|-----|------------|---|-------------|-------------|--------|------------|
| PUMA5 | 13/04/2010 11.47.08 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | | Thk: mm | Temp: °C | | Pres: BAR | | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | |
| SX1 | SULPHUREX GH/F | | | 01146 - 0 | | | SX1 | | SX1 | | 1 / 1 | TOTAL Kg: | | 9,26 | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_12.3 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01146 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.08 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01147 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_12.4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01147 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.09 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01148 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|--------|
| KV_12.5 | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01148 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|--|-------|--|-----------|-----------|-------------|--|----------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.09 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | | 7,59 | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | 0,80 | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | 0,57 | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 8,96 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01150 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 8,96 | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| TV_33.9 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01150 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.09 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,80 | | | | | | | | | | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,57 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,26 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01151 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,26 | | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| KV_33.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01151 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|-------|--|--|--|-----------|----------|------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.09 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | | | | | | 7,59 | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | | | | | 0,80 | | | | | |
| 2765 | 1 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | | | | | 0,57 | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 8,96 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 01152 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 8,96 | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|--------|
| LV_25.1 | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 01152 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-------|--|----------|--|-------------|-----------|-------------|--|-----------|--------|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.09 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 3,30 | m | 205 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | | | | | | 22,18 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 22,18 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 03101 - 0 | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 22,18 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03101 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|----------|-----------|-------------|--------|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.09 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 60,90 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 331,12 | | | | | | | | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,33 | | | | | | | | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,15 | | | | | | | | | | |
| 4458 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,31 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 332,92 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 03102 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 332,92 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03102 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|------------------|-----------|---------|--------|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.09 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 24,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 130,49 | | | | | | | | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,33 | | | | | | | | | | |
| 4458 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,31 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 132,13 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 03103 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 132,13 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03103 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|----|------------------------|-------|----|------------|---|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.09 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 24,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 97,18 | | | | | | | | | | |
| 4457 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,18 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 97,37 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 03104 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 97,37 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03104 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-------|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|-----------|----------|-------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.10 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 24,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 97,18 | | | | | | | | | | | |
| 5797 | 3 | 1+1/2 | In | 3,18 | 3,68 | mm | ,00 | 1,00 | NR | 205 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,57 | | | | | | | | | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 205 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,90 | | | | | | | | | | | |
| 4457 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,18 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 98,84 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 03107 - 0 | | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 98,84 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03107 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.10 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 24,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 60,05 | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | |
| 4455 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,10 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 60,59 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 03108 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 60,59 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03108 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.10 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|------------------|--|--|-----------------------|--|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|--|-----------------------|--|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|------|----|------------|--|-----------|-------------|--------|--------|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,40 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,51 | | |
| 1434 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 0,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,84 | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,25 | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 0,30 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,21 | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 6,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 32,62 | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 6,00 | m | 205 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 40,33 | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 0,40 | m | 205 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 3,49 | | |
| 3112 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 9,10 | | |
| 6079 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46355/0 FLG 150 LB RF (125÷250 AARH) Cast ASTM SA 216 WCB G 68 | 5201 | | | |
| 3126 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Globe ST.46274/3 SW-F 800# Forged ASTM A 105 D 72 | | 10,70 | | |
| 3190 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Strainer Y-Type ST.46276/1 SW-F 800# Forged ASTM A 105 F 69 | | 5,30 | | |
| 466 | 3/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 1,40 | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | |
| 469 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5193 | 1,40 | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 8,20 | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,37 | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,33 | | |
| 1645 | 3 | 1+1/2 | In | 3,18 | 3,68 | mm | ,00 | 3,00 | NR | 205 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 1,72 | | |

| | | | |
|--|---------------------------------|-------------------------|--|
| TI_03.1 PI_03.1 PCV_03.1 PSV_03.1 | Plant SX1 SULPHUREX GH/F | Piping Class 205 | Welding specification SP.1406/2-SP.1407/2 |
| | Line 03109 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|----------|--------|---------|--|-------------|--|-----------|--|----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.10 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1646 | 3 | 2 | In | 3,18 | 3,91 | mm | ,00 | 1,00 | NR | 205 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,57 | | | | | | | | | | | | | | |
| 1651 | 4 | 3 | In | 3,18 | 3,18 | mm | ,00 | 2,00 | NR | 205 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 1,72 | | | | | | | | | | | | | | |
| 1755 | 1+1/2 | 3/4 | In | 3,68 | 2,87 | mm | ,00 | 1,00 | NR | 205 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,26 | | | | | | | | | | | | | | |
| 1758 | 2 | 3/4 | In | 3,91 | 2,87 | mm | ,00 | 2,00 | NR | 205 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,86 | | | | | | | | | | | | | | |
| 1015 | 3/4 | 1/2 | In | 2,87 | 2,77 | mm | ,00 | 1,00 | NR | 205 | Reducing Insert M/F TA 50.6/1 SW-F x PL 3000# Forged ASTM A 105 TYPE 12 | | 0,11 | | | | | | | | | | | | | | |
| 1056 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,24 | | | | | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,15 | | | | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 8,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,88 | | | | | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | | | | |
| 5193 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,48 | | | | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | | | | | | | | | | | |
| 660 | 3/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| 663 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 130,77 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 03109 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 130,77 | | | | | | | | | | |

| | | | | |
|--|---|--|--|------------------|
| TI_03.1 PI_03.1 PCV_03.1 PSV_03.1 | Plant SX1 SULPHUREX GH/F Line 03109 - 0 Dang. fluid type Area SX1 Zones | Piping Class 205 Fluid Coating Sketch Sht 1 / 1 | Welding specification SP.1406/2-SP.1407/2 System De pres Isometric code | Op tem Page 2 |
|--|---|--|--|------------------|

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|----------|-----------|-------------|--------|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.10 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 60,00 | m | 205 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 403,32 | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | | | | | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,15 | | | | | | | | | | |
| 4460 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,41 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 406,24 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 03110 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 406,24 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03110 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|---------------------|--------|-----------|--|------------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | |
| PUMA5 | | | 13/04/2010 11.47.10 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 40,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 217,49 | | | | | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 4,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 2,66 | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 220,15 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 03111 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 220,15 | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03111 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.10 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 40,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 161,97 | | | | | | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 6,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 2,21 | | | | | | | | | | | | |
| 1756 | 1+1/2 | 1 | In | 3,68 | 3,38 | mm | ,00 | 1,00 | NR | 205 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,26 | | | | | | | | | | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,15 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 164,58 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 03112 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 164,58 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03112 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.11 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 10,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 12,66 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 22,72 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 03115 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 22,72 | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03115 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|------------------------|-------|----|------------|---|-----|-------|------------------|--|-----------|-----------|-------------|-------|-----------|--------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.11 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 10,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | 12,66 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | | | | | | 5,10 | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | | | | | | 4,08 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 21,84 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 03116 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 21,84 | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03116 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|------------------------|------|----|------------|---|---------------------|-------|------------------|--|-----------|-------------|------------|--------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | |
| PUMA5 | | | 13/04/2010 11.47.11 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | 7,59 | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | | | | | 5,10 | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | | | | | 4,08 | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 16,78 | | |
| SX1 | SULPHUREX GH/F | | | | | | 03118 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 16,78 | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03118 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.11 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 10,30 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 13,04 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 23,1 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 03119 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 23,1 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 03119 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|-----------|------|----|--------|------------------------|-----|------------|---|-----------|-------------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.11 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 9,10 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 61,17 | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 17,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 272,82 | | | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 34,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 893,27 | | | | |
| 304 | 10 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 15,80 | | | | |
| 2086 | 6 | 3 | In | 3,96 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,18 | | | | |
| 2102 | 10 | 6 | In | 3,96 | 3,96 | mm | ,00 | 1,00 | NR | 203 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,55 | | | | |
| 4460 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,41 | | | | |
| 4467 | 10 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 4,28 | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 1254,49 | | | | |
| SX1 | SULPHUREX GH/F | | | 04101 - 0 | | | SX1 | | SX1 | 1 / 1 | | | TOTAL Kg: | 1254,49 | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 04101 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|-----------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.11 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 9,10 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 61,17 | | | | | | |
| 1458 | 8 | 0 | In | 3,96 | | mm | ,00 | 17,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 357,16 | | | | | | |
| 1463 | 14 | 0 | In | 6,35 | | mm | ,00 | 33,70 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1.843,03 | | | | | | |
| 307 | 14 | 0 | In | 6,35 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 45,34 | | | | | | |
| 2076 | 4 | 3 | In | 3,18 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,86 | | | | | | |
| 2090 | 8 | 4 | In | 3,96 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 3,17 | | | | | | |
| 2114 | 14 | 8 | In | 6,35 | 3,96 | mm | ,00 | 1,00 | NR | 203 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 17,97 | | | | | | |
| 4460 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,41 | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 2329,11 | | | | | |
| SX1 | SULPHUREX GH/F | | | | 04102 - 0 | | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | 2329,11 | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| Disk plate ø 230mm thk. 5 mm - Fe 360B-UNI 7070 = n 1 pz | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 04102 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|------------------|-----------|---------|--------|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.47.11 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 16,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 420,36 | | | | | | | | | | |
| 304 | 10 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 15,80 | | | | | | | | | | |
| 4467 | 10 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 4,28 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 440,44 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 04103 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 440,44 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 04103 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|------------------|--|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.11 | | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1463 | 14 | 0 | In | 6,35 | | mm | ,00 | 16,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 875,03 | | | | | | | | | | | |
| 307 | 14 | 0 | In | 6,35 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 45,34 | | | | | | | | | | | |
| 4470 | 14 | 0 | In | 6,35 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 11,37 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 931,74 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 04104 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 931,74 | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 04104 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|----|---------------------|------|-----------|--------|------------------------|----|------------|--|-----------|-------------|--------|-------------|--|----------|--|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.12 | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 40,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 100,09 | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,54 | | | | | | | | | |
| 1749 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 100,76 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 04105 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 100,76 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 04105 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|----------|--------|-------------|--|----------|--|-----------|------------|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
| PUMA5 | | | | 13/04/2010 11.47.12 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 26,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 425,28 | | | | | | | | | | | | |
| 133 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,85 | | | | | | | | | | | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 5,66 | | | | | | | | | | | | |
| 4464 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 2,02 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 435,82 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 04106 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 435,82 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 04106 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: 0 | | 13/04/2010 | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|----------|--------|-------------|--|----------|--|------------|--|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.12 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 26,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 425,28 | | | | | | | | | | | | |
| 133 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,85 | | | | | | | | | | | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 5,66 | | | | | | | | | | | | |
| 4464 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 2,02 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 435,82 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 04107 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 435,82 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 04107 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.12 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 20,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 80,98 | | | | | | | | | | | | | | |
| 4457 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,18 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 81,17 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 05101 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 81,17 | | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 05101 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.12 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 20,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 80,98 | | | | | | | | | | | | | | |
| 4457 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,18 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 81,17 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 05102 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 81,17 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 05102 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|------------------|--|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.12 | | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 24,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 97,18 | | | | | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,37 | | | | | | | | | | | |
| 4457 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,18 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 97,73 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 05103 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 97,73 | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 05103 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|---------------------|--------|-----------|--|------------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | |
| PUMA5 | | | 13/04/2010 11.47.12 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 24,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 97,18 | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,37 | | | | | | | |
| 4457 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,18 | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 97,73 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 05104 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 97,73 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 05104 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|------------------|--------|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.12 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 24,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 60,05 | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,54 | | | | | | | | | | |
| 4583 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 211 | Cap TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,25 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 60,84 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 05105 - 0 | | SX1 | | SX1 | 1 / 1 | | TOTAL Kg: | | 60,84 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 05105 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|------------------|--|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.13 | | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 24,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 60,05 | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,54 | | | | | | | | | | | |
| 4583 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 211 | Cap TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,25 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 60,84 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 05106 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 60,84 | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 05106 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.13 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 12,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 65,25 | | | | | | | | | | |
| 4458 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,31 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 65,56 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 07101 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 65,56 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 07101 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|------------------|--------|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.13 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 32,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 173,99 | | | | | | | | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,66 | | | | | | | | | | |
| 4458 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,31 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 174,97 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 07102 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 174,97 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 07102 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | 0 | 13/04/2010 | | |
|------------|----------------|----|---------------------|------|-----------|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|---------|-------------|----------|------|-----------|------------|----------|--|
| PUMA5 | | | 13/04/2010 11.47.13 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,13 | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,25 | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 8,70 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 75,81 | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 17,60 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 727,81 | | | | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 11,20 | | | | | | | | | |
| 479 | 14 | 0 | In | | | mm | ,00 | 6,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5249 | 216,00 | | | | | | | | | |
| 4728 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On x Wafer ASME B16.5 150 LB FF (125÷250 AARH) Forged ASTM A 105 | 5201 | 11,20 | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 3,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 6,20 | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 3,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 102,39 | | | | | | | | | |
| 5632 | 16 | 14 | In | 4,78 | 4,78 | mm | ,00 | 1,00 | NR | 206 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 16,59 | | | | | | | | | |
| 1056 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,24 | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,60 | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 16,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 3,68 | | | | | | | | | |
| 5249 | 1 | 0 | In | | | mm | 135,00 | 48,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 82,56 | | | | | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | |
| 673 | 14 | 0 | In | | | mm | ,00 | 4,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 1255,65 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 11001 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 1255,65 | | | | | | | |

| | | | |
|----------|--------------------------|------------------|---|
| TET_11.9 | Plant SX1 SULPHUREX GH/F | Piping Class 206 | Welding specification SP.1406/2-SP.1407/3 |
| PI_11.1 | Line 11001 - 0 | Fluid | System |
| PT_11.7 | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |
| | | | Page 1 |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.13 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 8,00 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 330,82 | | | | | | | | | | | | | | |
| 5052 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5258 | 65,00 | | | | | | | | | | | | | | |
| 479 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5249 | 72,00 | | | | | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 68,26 | | | | | | | | | | | | | | |
| 5258 | 1 | 0 | In | | | mm | 215,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 26,64 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 562,72 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11002 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 562,72 | | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11002 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|----|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|-------------|----------|-----------|----------|------------|
| PUMA5 | | | 13/04/2010 11.47.13 | | | | | | | | | | | DOC: | 1E35-65-029 | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,40 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,00 | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 10,60 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 438,34 | | | | | | |
| 479 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5249 | 36,00 | | | | | | |
| 5570 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 17,06 | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 68,26 | | | | | | |
| 1056 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 3,00 | NR | 206 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,90 | | | | | | |
| 1189 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Plug Hex. TA 50.7/2 THRD-M NPT 3000# Forged ASTM A 105 | | 0,35 | | | | | | |
| 5249 | 1 | 0 | In | | | mm | 135,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 20,64 | | | | | | |
| 673 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 582,93 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11004 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 582,93 | | | | | |

| | | | |
|-----------|--------------------------|------------------|---|
| TET_11.11 | Plant SX1 SULPHUREX GH/F | Piping Class 206 | Welding specification SP.1406/2-SP.1407/3 |
| PI_11.3 | Line 11004 - 0 | Fluid | System |
| TL_11.2 | Dang. fluid type | Coating | De pres |
| FE_11.1 | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |
| | | | Page 1 |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|-----|------------|---|-----------|-------------|----------|---------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.13 | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 11,80 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 487,96 | | | | | | | | | | |
| 3025 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Check ST.46708/1 WAFER 150 LB RF (125÷250 AARH) | 5255 | 37,00 | | | | | | | | | | |
| | | | | | | | | | | | Forged ASTM A 105 R 110 | | | | | | | | | | | | |
| 479 | 14 | 0 | In | | | mm | ,00 | 8,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged | 5249 | 288,00 | | | | | | | | | | |
| | | | | | | | | | | | ASTM A 105 | | | | | | | | | | | | |
| 5570 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 17,06 | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 5,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 170,65 | | | | | | | | | | |
| 5595 | 14 | 10 | In | 4,78 | 3,96 | mm | ,00 | 2,00 | NR | 206 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 27,05 | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | |
| 1124 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,15 | | | | | | | | | | |
| 5249 | 1 | 0 | In | | | mm | 135,00 | 60,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 103,20 | | | | | | | | | | |
| | | | | | | | | | | | ASTM A 193 B7//ASTM A 194 GR.2H | | | | | | | | | | | | |
| 5255 | 1 | 0 | In | | | mm | 175,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 23,64 | | | | | | | | | | |
| | | | | | | | | | | | ASTM A 193 B7//ASTM A 194 GR.2H | | | | | | | | | | | | |
| 673 | 14 | 0 | In | | | mm | ,00 | 7,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 1155,33 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11005 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 1155,33 | | | | | | | | |

KV_11.10
ME_11.1
TET_11.18
PT_11.18
12Y1

Plant SX1 SULPHUREX GH/F
Line 11005 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 206
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/3
System
De pres
Isometric code

Op tem
Page 1

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.13 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 0,80 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,97 | | |
| 1458 | 8 | 0 | In | 3,96 | | mm | ,00 | 0,30 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,30 | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 57,00 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1.497,55 | | |
| 3023 | 10 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Valve Check ST.46708/1 WAFER 150 LB RF (125÷250 AARH) | 5237 | 30,00 | | |
| | | | | | | | | | | | Forged ASTM A 105 R 110 | | | | |
| 5046 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5210 | 6,70 | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 11,20 | | |
| 476 | 8 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5216 | 25,20 | | |
| 477 | 10 | 0 | In | | | mm | ,00 | 4,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 74,00 | | |
| 136 | 10 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 8,75 | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,07 | | |
| 304 | 10 | 0 | In | 3,96 | | mm | ,00 | 7,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 110,60 | | |
| 1679 | 10 | 8 | In | 3,96 | 3,96 | mm | ,00 | 2,00 | NR | 206 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 9,11 | | |
| 1686 | 12 | 10 | In | 4,78 | 3,96 | mm | ,00 | 1,00 | NR | 206 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 7,55 | | |
| 4548 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,25 | | |
| 5210 | 5/8 | 0 | In | | | mm | 145,00 | 8,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,40 | | |
| 5216 | 3/4 | 0 | In | | | mm | 110,00 | 16,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 14,08 | | |

| | | | | | |
|--------------------|--------------------------|------------------|---|--|--------|
| FE_16.1 FV_16.1 | Plant SX1 SULPHUREX GH/F | Piping Class 206 | Welding specification SP.1406/2-SP.1407/3 | | |
| | Line 11006 - 0 | Fluid | System | | |
| | Dang. fluid type | Coating | De pres | | Op tem |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code | | Page 1 |
| | Zones | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|----|------------------------|-------|-----|------------|---|-----------|-------------|------------------|---------|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.14 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 5237 | 7/8 | 0 | In | | | mm | 155,00 | 24,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 16,56 | | | | | | | | | | |
| 670 | 8 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| 671 | 10 | 0 | In | | | mm | ,00 | 4,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 1829,54 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11006 - 0 | | SX1 | | SX1 | 1 / 1 | | TOTAL Kg: | | 1829,54 | | | | | | | |

| | | | | | | | |
|--------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| FE_16.1 FV_16.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11006 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | Page 2 | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.14 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-----|----|----|------|----|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 4,60 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 190,22 | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | |
| 5570 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 209 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 34,13 | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 24,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 18,72 | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 243,07 | | |

| | | | | | | | | | | |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|--------|
| SX1 | SULPHUREX GH/F | | 11007 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 243,07 |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|--------|

| | | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| KV_11.19 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 | |
| | Line | 11007 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|---------------------|------|-----------|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|-----------|-------------|--------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.14 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,40 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,51 | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,30 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,75 | | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,50 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 103,38 | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,41 | | | | | | | | | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 5,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | | | | | | | | | |
| 5570 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 209 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 17,06 | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 3,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 102,39 | | | | | | | | | | |
| 918 | 1/2 | 1/4 | In | | | mm | ,00 | 2,00 | NR | 209 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| 1056 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 3,00 | NR | 209 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,90 | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 54,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 42,12 | | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 5,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 267,76 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 11008 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 267,76 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| KV_11.3 KV_11.6 11Y1 TI_11.8 TET_11.10 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 11008 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|-----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|----------|-----------|-------------|--------|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.14 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,15 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,19 | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,30 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,75 | | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 0,30 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 12,41 | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 4,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | | | | | | | | | |
| 594 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | 19,00 | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 34,13 | | | | | | | | | | |
| 5632 | 16 | 14 | In | 4,78 | 4,78 | mm | ,00 | 1,00 | NR | 209 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 16,59 | | | | | | | | | | |
| 918 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 209 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,60 | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 64,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 49,92 | | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 4,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | |
| 801 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 133,85 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 11009 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 133,85 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| KV_11.11 KV_11.18 TET TI_11.7 | Plant | SX1 SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 11009 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | Page 1 |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|----|---------------------|-----------|----|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|-------------|--|----------|---|------------|--|
| PUMA5 | | | 13/04/2010 11.47.14 | | | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,50 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 6,07 | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 4,80 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 198,49 | | | | | | | |
| 469 | 1+1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5193 | 2,80 | | | | | | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | | | | | | |
| 284 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,74 | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 34,13 | | | | | | | |
| 5193 | 1/2 | 0 | In | | | mm | 75,00 | 8,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,96 | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 24,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 18,72 | | | | | | | |
| 752 | 1+1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5D FLAT | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 261,91 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | 11010 - 0 | | | SX1 | | SX1 | | 1 / 1 | TOTAL Kg: | 261,91 | | | | | | | |

KV_11.5
KV_11.4

Plant SX1 SULPHUREX GH/F
Line 11010 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 209
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/2
System
De pres
Isometric code

Op tem

Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|----|------------|---|-----|--|----------|-----------|-------------|--------|-----------|--------|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.14 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | | |
| 1462 | 12 | 0 | In | 4,78 | | mm | ,00 | 2,00 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | | | | 75,21 | | | | | | | |
| 2953 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Valve Butterfly ST.46562/2 WAFER 150 LB RF (125÷250 AARH) Forged ASTM A 105 B 83 | | | | 5241 | 50,00 | | | | | | | |
| 478 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | 5232 | 28,00 | | | | | | | |
| 4718 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Flange Slip-On x Wafer ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | 5232 | 28,00 | | | | | | | |
| 306 | 12 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | | | | 27,10 | | | | | | | |
| 5598 | 14 | 12 | In | 4,78 | 4,78 | mm | ,00 | 1,00 | NR | 209 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | | | | 13,53 | | | | | | | |
| 5232 | 7/8 | 0 | In | | | mm | 120,00 | 12,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | 7,08 | | | | | | | |
| 5241 | 7/8 | 0 | In | | | mm | 200,00 | 12,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | 9,72 | | | | | | | |
| 761 | 12 | 0 | In | | | mm | ,00 | 3,00 | NR | 209 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5D FLAT | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | Total Kg: | | 238,64 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11011 - 0 | | | | SX1 | SX1 | | | | 1 / 1 | | TOTAL Kg: | | 238,64 | | | |

| | | | | | | | |
|-------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| CHAIN mt. 4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 11011 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.14 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|----|----|------|-----------|----|--------|------|-----|------------|--|-----------|-------------|--------|--------|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,13 | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1,34 | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 1,70 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 14,81 | | |
| 5024 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5210 | 4,50 | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 5,60 | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,13 | | |
| 2076 | 4 | 3 | In | 3,18 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,86 | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | |
| 5210 | 5/8 | 0 | In | | | mm | 145,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,40 | | |
| M Erection | | | | | | | | | | | | Total Kg: | 33,9 | | |
| SX1 | SULPHUREX GH/F | | | | 11012 - 0 | | | | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 33,9 | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11012 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.15 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,63 | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,09 | | | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 4,60 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 40,08 | | | | | | | | | | | |
| 5024 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5210 | 4,50 | | | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,13 | | | | | | | | | | | |
| 1649 | 4 | 2 | In | 3,18 | 3,91 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,86 | | | | | | | | | | | |
| 1056 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,24 | | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | -8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | -1,84 | | | | | | | | | | | |
| 5210 | 5/8 | 0 | In | | | mm | 145,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,40 | | | | | | | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | -1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 52,65 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 11013 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 52,65 | | | | | | | | | |

| | | | | | | |
|--------------------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| TL_11.5 PI_11.6 | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11013 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.15 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,13 | | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 6,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 52,28 | | | | | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 5,60 | | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 4,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 8,27 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | | | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 68,24 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11014 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 68,24 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11014 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.15 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|----|----|------|-----------|----|--------|------|-----|------------|--|-----------|-------------|--------|--------|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,13 | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1,34 | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 1,40 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 12,20 | | |
| 5024 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5210 | 4,50 | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 5,60 | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,07 | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | |
| 5210 | 5/8 | 0 | In | | | mm | 145,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,40 | | |
| M Erection | | | | | | | | | | | | Total Kg: | 28,36 | | |
| SX1 | SULPHUREX GH/F | | | | 11015 - 0 | | | | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 28,36 | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11015 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.15 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|-------|----|-----------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,40 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,51 | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,75 | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,09 | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 5,80 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 50,54 | | |
| 2830 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,60 | | |
| 5024 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5210 | 4,50 | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 5,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 28,00 | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,13 | | |
| 1649 | 4 | 2 | In | 3,18 | 3,91 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,86 | | |
| 1650 | 4 | 2+1/2 | In | 3,18 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,86 | | |
| 1056 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,24 | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,60 | | |
| 1126 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,15 | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 16,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 3,68 | | |
| 5210 | 5/8 | 0 | In | | | mm | 145,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,40 | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 101,91 | |
| SX1 | SULPHUREX GH/F | | | 11016 - 0 | | | SX1 | SX1 | | 1 / 1 | | TOTAL Kg: | | 101,91 | |

| | | | | | | | | |
|--------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| TL_11.6 PI_11.5 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 | |
| | Line | 11016 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|-------------|-----------------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.15 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 3,80 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 25,54 | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 12,30 | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,24 | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 42,53 | | |
| SX1 | SULPHUREX GH/F | | | | | 11017 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: 42,53 | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11017 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.15 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|----|----|------|------|-----------|--------|-------|----|------------|--|-----------|-------------|--------|-----------|-------|
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1,34 | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1,74 | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 4,10 | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 5,60 | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 1,18 | | | |
| 1651 | 4 | 3 | In | 3,18 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,86 | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 12,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,76 | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 17,58 | | |
| SX1 | SULPHUREX GH/F | | | | | 11018 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 17,58 |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11018 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.15 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 3,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 20,17 | | | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 4,10 | | | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 1,18 | | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,92 | | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 26,36 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11019 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 26,36 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11019 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|-----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|-------------|-----------|-----------|---|------------|--|
| PUMA5 | | | 13/04/2010 11.47.16 | | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,15 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,19 | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,40 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 99,25 | | | | | | |
| 479 | 14 | 0 | In | | | mm | ,00 | 3,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5249 | 108,00 | | | | | | |
| 5570 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 17,06 | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 34,13 | | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | |
| 5249 | 1 | 0 | In | | | mm | 135,00 | 36,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 61,92 | | | | | | |
| 673 | 14 | 0 | In | | | mm | ,00 | 3,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 320,58 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 11020 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 320,58 | | | |

| | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| KV_11.1A | Plant | SX1 SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11020 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|-----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.16 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,15 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,19 | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 4,00 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 165,41 | | | | | |
| 479 | 14 | 0 | In | | | mm | ,00 | 3,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5249 | 108,00 | | | | | |
| 5570 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 17,06 | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 34,13 | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | |
| 5249 | 1 | 0 | In | | | mm | 135,00 | 36,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 61,92 | | | | | |
| 673 | 14 | 0 | In | | | mm | ,00 | 3,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 386,75 | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11021 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 386,75 | | | |

| | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| KV_11.1B | Plant | SX1 | SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11021 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.16 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----|----|----|------|----|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,40 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 99,25 | | |
| 479 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5249 | 72,00 | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 68,26 | | |
| 5249 | 1 | 0 | In | | | mm | 135,00 | 24,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 41,28 | | |
| 673 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 280,79 | | |

| | | | | | | | | | | |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|--------|
| SX1 | SULPHUREX GH/F | | 11022 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 280,79 |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|--------|

| | | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|--|
| KV_11.9 | Plant | SX1 SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 | |
| | Line | 11022 - 0 | Fluid | | System | | |
| | Dang. fluid type | | Coating | | De pres | Op tem | |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|--------|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.16 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,50 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,70 | | | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 8,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,88 | | | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 7,38 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 11023 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 7,38 | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| KV_11.9 | Plant | SX1 SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11023 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|---------------------|------|----|----|------------------------|-------|----|------------|---|-----------|-------------|----------|-----------|-------------|--------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.16 | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 8,00 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 330,82 | | | | | | | | | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 4,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 136,52 | | | | | | | | | | |
| 918 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 209 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 24,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7//ASTM A 194 GR.2H | | 18,72 | | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 486,37 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11024 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 486,37 | | | | | | |

KV_11.2

Plant SX1 SULPHUREX GH/F
Line 11024 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 209
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/2
System
De pres
Isometric code

Op tem
Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.16 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,50 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 62,03 | | | | | | | | | | | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 24,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 18,72 | | | | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 80,75 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11025 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 80,75 | | | | | | | | | | |

| | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| KV_11.12 | Plant | SX1 SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 11025 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | | | | |
|------------|----------------|----|---------------------|------|----|-----------|------------------------|-------|----|------------|--|-----------|-------------|--------|-------------|------|--------|-------|------------|-------|-----|-------|----|
| PUMA5 | | | 13/04/2010 11.47.16 | | | | | | | | | | | DOC: | 1E35-65-029 | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: | In | Thk: | mm | Temp: | °C | Pres: | BAR | Corr: | mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,13 | | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 8,70 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 75,81 | | | | | | | | | | |
| 5024 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5210 | 4,50 | | | | | | | | | | |
| 3181 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Strainer Y-Type ST.46349/3 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 216 GR. WCB F 71 | 5201 | 34,00 | | | | | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 22,40 | | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 3,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 6,20 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 16,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 3,68 | | | | | | | | | | |
| 5210 | 5/8 | 0 | In | | | mm | 145,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,40 | | | | | | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 149,24 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 11101 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 149,24 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11101 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|--------|-----------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.17 | | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,13 | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 6,40 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 55,77 | | | | | | |
| 3007 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46357/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 36 CADMIUM PLATED R 87 | 5204 | 2,00 | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 11,20 | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 3,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 6,20 | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | |
| 5204 | 5/8 | 0 | In | | | mm | 110,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,00 | | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 77,42 | | | | |
| SX1 | SULPHUREX GH/F | | | | | 11102 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 77,42 | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11102 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.17 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|----|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 8,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 57,14 | | |
| 5023 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5209 | 3,50 | | |
| 471 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5200 | 3,60 | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 16,40 | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 5,60 | | |
| 296 | 2+1/2 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,80 | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 5,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 5,88 | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,07 | | |
| 1651 | 4 | 3 | In | 3,18 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,86 | | |
| 5200 | 5/8 | 0 | In | | | mm | 90,00 | 2,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 16,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 3,68 | | |
| 5209 | 5/8 | 0 | In | | | mm | 140,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,16 | | |
| 665 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |

| | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|--------|
| M Erection | | | | | | | | | | | | Total Kg: | 101,12 |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|--------|

| | | | | | | | |
|-----|----------------|-----------|-----|-----|-------|-----------|--------|
| SX1 | SULPHUREX GH/F | 11103 - 0 | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 101,12 |
|-----|----------------|-----------|-----|-----|-------|-----------|--------|

| | | | | | | |
|--|--------------------------|--------------|-------|-----------------------|---------------------|--|
| | Plant SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 | |
| | Line 11103 - 0 | Fluid | | System | | |
| | Dang. fluid type | Coating | | De pres | Op tem | |
| | Area SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|-----------|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.17 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,30 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 15,46 | | | | | | | | | | |
| 3006 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46357/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 36 CADMIUM PLATED R 87 | 5204 | 1,60 | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 16,40 | | | | | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 5,60 | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | | | | | | | |
| 1651 | 4 | 3 | In | 3,18 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,86 | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 16,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 3,68 | | | | | | | | | | |
| 5204 | 5/8 | 0 | In | | | mm | 110,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,00 | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 46,95 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 11104 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 46,95 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11104 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|----|------------------------|-------|----|------------|---|-----------|-------------|----------|--------|-------------|-----------|----------|--------|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.17 | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 10,90 | m | 205 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 73,27 | | | | | | | | | | |
| 3129 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Globe ST.46348/4 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 216 GR. WCB D 79 | 5201 | 30,00 | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 12,30 | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 7,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 8,24 | | | | | | | | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,15 | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 12,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7//ASTM A 194 GR.2H | | 2,76 | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 126,72 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11107 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 126,72 | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 11107 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|-----------|----------|-------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.17 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 10,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 12,66 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,40 | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 20,52 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 11108 - 0 | | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 20,52 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 11108 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.17 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1452 | 2+1/2 | 0 | In | 3,18 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1,10 | | | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 7,80 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 52,43 | | | | | | | | | | | |
| 471 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5200 | 3,60 | | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 8,20 | | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 5,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 5,88 | | | | | | | | | | | |
| 5200 | 5/8 | 0 | In | | | mm | 90,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,88 | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,92 | | | | | | | | | | | |
| 665 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 73,01 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11109 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 73,01 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11109 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.17 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|------|----|------------|--|-----------|-------------|--------|--------|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,90 | | |
| 1452 | 2+1/2 | 0 | In | 3,18 | | mm | ,00 | 0,30 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1,64 | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 9,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 60,50 | | |
| 3006 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46357/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 36 CADMIUM PLATED R 87 | 5204 | 1,60 | | |
| 3129 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Globe ST.46348/4 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 216 GR. WCB D 79 | 5201 | 30,00 | | |
| 471 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5200 | 3,60 | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 16,40 | | |
| 129 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,60 | | |
| 231 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,40 | | |
| 296 | 2+1/2 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,80 | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 6,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 7,06 | | |
| 1647 | 3 | 2+1/2 | In | 3,18 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,57 | | |
| 5200 | 5/8 | 0 | In | | | mm | 90,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,88 | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,92 | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,92 | | |
| 5204 | 5/8 | 0 | In | | | mm | 110,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,00 | | |
| 665 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |

| | | | |
|--|--------------------------|------------------|---|
| | Plant SX1 SULPHUREX GH/F | Piping Class 203 | Welding specification SP.1406/2-SP.1407/3 |
| | Line 11110 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|-----------|------------------------|------|----|------------|--|-----------|-------------|----------|-----------|-------------|--------|----------|--|-----------|--|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.47.17 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 128,79 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 11110 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 128,79 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11110 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|------|----|------------------------|------|----|------------|--|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.18 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 2,50 | | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 0,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 3,36 | | | | | | | | | | |
| 3125 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Globe ST.46274/3 SW-F 800# Forged ASTM A 105 D 72 | | 5,40 | | | | | | | | | | |
| 6084 | 3 | 1 | In | 3,18 | 3,38 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,57 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 11,84 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11111 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 11,84 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 11111 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|-----------|----------|-------|-------------|--|----------|--|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.18 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 9,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,39 | | | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 0,50 | m | 205 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 3,36 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,40 | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,50 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | | |
| 4460 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,41 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 24,53 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11113 - 0 | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 24,53 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 11113 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|---------------------|------|----|----|------------------------|------|----|------------|---|-----|--|----------|-----------|-------------|-------|----------|--------|-----------|------------|----------|--|
| PUMA5 | | | 13/04/2010 11.47.18 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | 10,13 | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | 0,30 | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | 5191 | 0,80 | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | 0,38 | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | 0,88 | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | Total Kg: | | 12,49 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 11114 - 0 | | | | SX1 | SX1 | | 1 / 1 | | TOTAL Kg: | | 12,49 | | | | | |

| | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| KY_11.14 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11114 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|---|-----------|---------------------|--------|-----------|--|------------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | |
| PUMA5 | | | 13/04/2010 11.47.18 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 10,13 | | | | | | | |
| 6021 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46396/3 THRD-F NPT 150 LB Forged BRONZE R 96 | | 0,37 | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 10,88 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 11115 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 10,88 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 11115 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.18 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1477 | 16 | 0 | In | 4,78 | | mm | ,00 | 10,00 | m | 219 | Pipe ASME B36.10 PL E.R.W. ASTM A 312 TP 304H RX 20% | | 483,05 | | | | | | | | | | |
| 1514 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,40 | m | 219 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304H | | 1,02 | | | | | | | | | | |
| 569 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 219 | Flange Slip-On ASME B16.5 300 LB ST (63÷125 AARH) Forged ASTM A 182 GR. F304H | 5369 | 91,83 | | | | | | | | | | |
| 386 | 16 | 0 | In | 4,78 | | mm | ,00 | 4,00 | NR | 219 | 90° Elbow Long Radius ASME B16.9 BE Welded ASTM A 403 GR. WP304H RX 20% | | 182,80 | | | | | | | | | | |
| 1066 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 219 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304H | | 0,61 | | | | | | | | | | |
| 5369 | 1+1/4 | 0 | In | | | mm | 190,00 | 20,00 | NR | 219 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 GR. B8 CL.2/A194 GR. 8 | | 73,00 | | | | | | | | | | |
| 797 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 219 | Gasket TA 50.5/31 300 LB ST-SG (63÷125AARH) _ F16L SPIRAL WOUND F16L | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 832,31 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12001 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 832,31 | | | | | | | | |

| | | | | | | | | |
|---|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| TET_12.1.1B TET_12.1.1A 12Y12 12Y13 12Y14 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 219 | Welding specification | SP.1406/2-SP.1408/2 | |
| | Line | 12001 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|-----|---------------------|------|----|-----------|------------------------|-------|----|------------|--|-----------|-------------|----------|-----------|--------|------------|--|
| PUMA5 | | | 13/04/2010 11.47.18 | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 207 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 207 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | |
| 5697 | 16 | 0 | In | 4,78 | | mm | ,00 | 8,20 | m | 207 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B RX 20% | | 388,20 | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | |
| 527 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Flange Slip-On ASME B16.5 150 LB ST (63÷125 AARH) Forged ASTM A 105 | 5250 | 46,00 | | | | | |
| 5606 | 16 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 207 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 44,79 | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 207 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | |
| 5250 | 1 | 0 | In | | | mm | 140,00 | 16,00 | NR | 207 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 28,00 | | | | | |
| 778 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Gasket TA 50.5/31 150 LB ST-SG (63÷125AARH) _ E11H Corrugate Metal Gasket E11H | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 508,02 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 12002 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 508,02 | | |

| | | | | | | |
|------------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| TET_12.1.9 | Plant | SX1 SULPHUREX GH/F | Piping Class | 207 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 12002 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|---------------------|------|----|----|------------------------|-------|----|------------|--|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.18 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 207 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 207 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | |
| 5696 | 14 | 0 | In | 4,78 | | mm | ,00 | 6,30 | m | 207 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B RX 20% | | 260,52 | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | |
| 526 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Flange Slip-On ASME B16.5 150 LB ST (63÷125 AARH) Forged ASTM A 105 | 5249 | 72,00 | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 207 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 68,26 | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 207 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | |
| 5249 | 1 | 0 | In | | | mm | 135,00 | 24,00 | NR | 207 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 41,28 | | | | | | | | | | |
| 777 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Gasket TA 50.5/31 150 LB ST-SG (63÷125AARH) _ E11H Corrugate Metal Gasket E11H | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 443,1 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12003 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 443,1 | | | | | | |

12Y18
TET_12.1.10

Plant SX1 SULPHUREX GH/F
Line 12003 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 207
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/2
System
De pres
Isometric code

Op tem

Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|---------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.19 | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,60 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,76 | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,60 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,50 | | | | | | | | | | | |
| 1461 | 10 | 0 | In | 4,78 | | mm | ,00 | 1,50 | m | 212 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 47,42 | | | | | | | | | | | |
| 1462 | 12 | 0 | In | 4,78 | | mm | ,00 | 25,00 | m | 212 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 940,11 | | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | | |
| 477 | 10 | 0 | In | | | mm | ,00 | 2,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 37,00 | | | | | | | | | | | |
| 478 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 28,00 | | | | | | | | | | | |
| 306 | 12 | 0 | In | 4,78 | | mm | ,00 | 6,00 | NR | 212 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 162,62 | | | | | | | | | | | |
| 1687 | 12 | 10 | In | 4,78 | 4,78 | mm | ,00 | 1,00 | NR | 212 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 7,55 | | | | | | | | | | | |
| 1056 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 212 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,36 | | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 212 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | | |
| 5232 | 7/8 | 0 | In | | | mm | 120,00 | 30,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 17,70 | | | | | | | | | | | |
| 703 | 10 | 0 | In | | | mm | ,00 | 2,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | | |
| 704 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 1243,56 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12004 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 1243,56 | | | | | | | | | |

| | | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|--------|
| FE_16.2 TET_12.1.12 PISH_12.1 PI_12.2 PT_16.1 FV_16.2 | Plant | SX1 SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 | |
| | Line | 12004 - 0 | Fluid | | System | | |
| | Dang. fluid type | | Coating | | De pres | | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | | Page 1 |
| | Zones | | | | | | |
| | | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.19 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|-----|----|------|----|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | |
| 1467 | 24 | 0 | In | 6,35 | | mm | ,00 | 24,00 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 2.267,12 | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,41 | | |
| 311 | 24 | 0 | In | 6,35 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 269,24 | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | |
| 1189 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Plug Hex. TA 50.7/2 THRD-M NPT 3000# Forged ASTM A 105 | | 0,35 | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | |

| | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|---------|
| M Erection | | | | | | | | | | | | Total Kg: | 2537,96 |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|---------|

| | | | | | | | | | | |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|---------|
| SX1 | SULPHUREX GH/F | | 12005 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 2537,96 |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|---------|

Disk plate ø 620mm thk 5mm - Fe 360B-UNI7070 = n 1 pz

Plant SX1 SULPHUREX GH/F

Line 12005 - 0

Dang. fluid type

Area SX1

Zones

Piping Class 206

Fluid

Coating

Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/3

System

De pres

Isometric code

Op tem

Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|--------|----------|--|---------|--|-------------|--|-----------|--|----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.19 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 5,80 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 152,38 | | | | | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | | | | | |
| 5050 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5239 | 28,80 | | | | | | | | | | | | | | |
| 477 | 10 | 0 | In | | | mm | ,00 | 3,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 55,50 | | | | | | | | | | | | | | |
| 136 | 10 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 8,75 | | | | | | | | | | | | | | |
| 304 | 10 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 31,60 | | | | | | | | | | | | | | |
| 1122 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | | | | | |
| 5232 | 7/8 | 0 | In | | | mm | 120,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 7,08 | | | | | | | | | | | | | | |
| 5239 | 7/8 | 0 | In | | | mm | 190,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 9,36 | | | | | | | | | | | | | | |
| 671 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 293,71 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12006 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 293,71 | | | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12006 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.19 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|-----|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 0,90 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 23,65 | | |
| 1462 | 12 | 0 | In | 4,78 | | mm | ,00 | 2,80 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 105,29 | | |
| 5608 | 16 | 0 | In | 4,78 | | mm | ,00 | 0,50 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 23,67 | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | |
| 5050 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5239 | 28,80 | | |
| 477 | 10 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 37,00 | | |
| 480 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5250 | 46,00 | | |
| 136 | 10 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 8,75 | | |
| 138 | 12 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 13,58 | | |
| 306 | 12 | 0 | In | 4,78 | | mm | ,00 | 3,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 81,31 | | |
| 5606 | 16 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 44,79 | | |
| 1686 | 12 | 10 | In | 4,78 | 3,96 | mm | ,00 | 1,00 | NR | 206 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 7,55 | | |
| 5627 | 16 | 12 | In | 4,78 | 4,78 | mm | ,00 | 1,00 | NR | 206 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 16,59 | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | |
| 5239 | 7/8 | 0 | In | | | mm | 190,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 9,36 | | |
| 5250 | 1 | 0 | In | | | mm | 140,00 | 16,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 28,00 | | |

| | | | |
|----------------------|--------------------------|------------------|---|
| 12Y11 CHAIN mt. 4 | Plant SX1 SULPHUREX GH/F | Piping Class 206 | Welding specification SP.1406/2-SP.1407/3 |
| | Line 12009 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|--|-----|--|--|--|--|-----------|----------|--------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.19 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 674 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 474,82 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 12009 - 0 | | | | | SX1 | SX1 | | | | | 1 / 1 | | | | | TOTAL Kg: | | 474,82 | | | |

| | | | | | | |
|----------------------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| 12Y11 CHAIN mt. 4 | Plant | SX1 SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12009 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.19 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|-----|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1447 | 14 | 0 | In | 4,78 | | mm | ,00 | 3,00 | m | 244 | Pipe ASME B36.10 PL E.R.W. ASTM A 312 TP 304 | | 126,58 | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,50 | m | 244 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,94 | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 244 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,41 | | |
| 513 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Flange Slip-On ASME B16.5 150 LB ST (63÷125 AARH) Forged ASTM A 182 GR. F304 | 5351 | 46,94 | | |
| 372 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 244 | 90° Elbow Long Radius ASME B16.9 BE Welded ASTM A 403 GR. WP304 | | 69,65 | | |
| 373 | 16 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 244 | 90° Elbow Long Radius ASME B16.9 BE Welded ASTM A 403 GR. WP304 | | 45,70 | | |
| 2335 | 16 | 14 | In | 4,78 | 4,78 | mm | ,00 | 1,00 | NR | 244 | Reducer Eccentric ASME B16.9 BE Welded ASTM A 403 GR. WP304 | | 16,92 | | |
| 3 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Cross Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,29 | | |
| 1156 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F304 | | 0,15 | | |
| 1180 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 244 | Plug Hex. TA 50.7/2 THRD-M NPT 3000# Forged ASTM A 182 GR. F304 | | 0,27 | | |
| 4390 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 244 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,03 | | |
| 5351 | 1 | 0 | In | | | mm | 140,00 | 16,00 | NR | 244 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 320 GR B8 CL.2 / A194 GR 8 | | 28,00 | | |
| 778 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Gasket TA 50.5/31 150 LB ST-SG (63÷125AARH) _ E11H Corrugate Metal Gasket E11H | | | | |

| | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|--------|
| M Erection | | | | | | | | | | | | Total Kg: | 336,87 |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|--------|

| | | | | | | | |
|-----|----------------|-----------|-----|-----|-------|-----------|--------|
| SX1 | SULPHUREX GH/F | 12010 - 0 | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 336,87 |
|-----|----------------|-----------|-----|-----|-------|-----------|--------|

| | | | | | | |
|-------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| 12Y16 | Plant | SX1 SULPHUREX GH/F | Piping Class | 244 | Welding specification | SP.1406/2-SP.1408/2 |
| | Line | 12010 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.19 | | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 2,90 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 76,19 | | | | | | | | | | | | |
| 1462 | 12 | 0 | In | 4,78 | | mm | ,00 | 1,60 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 60,17 | | | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | | | |
| 5050 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5239 | 28,80 | | | | | | | | | | | | |
| 477 | 10 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 37,00 | | | | | | | | | | | | |
| 478 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 28,00 | | | | | | | | | | | | |
| 304 | 10 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 31,60 | | | | | | | | | | | | |
| 1686 | 12 | 10 | In | 4,78 | 3,96 | mm | ,00 | 1,00 | NR | 206 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 7,55 | | | | | | | | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | | | |
| 5232 | 7/8 | 0 | In | | | mm | 120,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 7,08 | | | | | | | | | | | | |
| 5239 | 7/8 | 0 | In | | | mm | 190,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 9,36 | | | | | | | | | | | | |
| 672 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 286,24 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12011 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 286,24 | | | | | | | | | | |

| | | | | | | | |
|-------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| CHAIN mt. 4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12011 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | IE35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.20 | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 82,71 | | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 34,13 | | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | |
| 1189 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Plug Hex. TA 50.7/2 THRD-M NPT 3000# Forged ASTM A 105 | | 0,35 | | | | | | | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 209 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 12,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7//ASTM A 194 GR.2H | | 9,36 | | | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 127,58 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12012 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 127,58 | | | | | | | | | |

| | | | | | | | |
|------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 12Y6 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 12012 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|------|----|-----------|------------------------|-----|------------|---|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.20 | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 2,90 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 76,19 | | | | | | | | | | |
| 1462 | 12 | 0 | In | 4,78 | | mm | ,00 | 1,60 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 60,17 | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | |
| 5050 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5239 | 28,80 | | | | | | | | | | |
| 477 | 10 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 37,00 | | | | | | | | | | |
| 478 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 28,00 | | | | | | | | | | |
| 304 | 10 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 31,60 | | | | | | | | | | |
| 1686 | 12 | 10 | In | 4,78 | 3,96 | mm | ,00 | 1,00 | NR | 206 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 7,55 | | | | | | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | |
| 5232 | 7/8 | 0 | In | | | mm | 120,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 7,08 | | | | | | | | | | |
| 5239 | 7/8 | 0 | In | | | mm | 190,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 9,36 | | | | | | | | | | |
| 672 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 286,24 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12013 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 286,24 | | | | | | | | |

CHAIN mt. 4

Plant SX1 SULPHUREX GH/F
Line 12013 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 206
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/3
System
De pres
Isometric code

Op tem

Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.20 | | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,40 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 99,25 | | | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 68,26 | | | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | | |
| 1189 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Plug Hex. TA 50.7/2 THRD-M NPT 3000# Forged ASTM A 105 | | 0,35 | | | | | | | | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 209 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 12,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 9,36 | | | | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 178,25 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12014 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 178,25 | | | | | | | | | | |

| | | | | | | | |
|-------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 12Y20 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 12014 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.20 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 2,50 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 40,12 | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | |
| 5048 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5223 | 10,30 | | | | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 15,00 | | | | | |
| 133 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,85 | | | | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 5,66 | | | | | |
| 1122 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | |
| 5223 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 8,48 | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 82,65 | | | | |
| SX1 | SULPHUREX GH/F | | | | 12015 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 82,65 | | | |

| | | | | | | | |
|------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 12Y4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12015 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.20 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 3,80 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 60,98 | | | | | | | | | | | | | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 7,50 | | | | | | | | | | | | | | |
| 133 | 6 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 5,70 | | | | | | | | | | | | | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 11,33 | | | | | | | | | | | | | | |
| 5214 | 3/4 | 0 | In | | | mm | 100,00 | 8,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 6,72 | | | | | | | | | | | | | | |
| 669 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 92,23 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12016 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 92,23 | | | | | | | | | | |

| | | | | | | |
|------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| 12Y5 | Plant | SX1 SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12016 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.20 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,13 | | | | | | | | | | | | | | |
| 1434 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 1,80 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,04 | | | | | | | | | | | | | | |
| 2839 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Valve Ball Full Port ST.46590/3 LUG 150 LB RF (125÷250 AARH) Forged ASTM A 105 S 127 | 5373 | 1,90 | | | | | | | | | | | | | | |
| 466 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,70 | | | | | | | | | | | | | | |
| 1290 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 211 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,46 | | | | | | | | | | | | | | |
| 4400 | 3/4 | 1/2 | In | | | mm | ,00 | 1,00 | NR | 212 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 2,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,22 | | | | | | | | | | | | | | |
| 692 | 3/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | | | | | |
| 5373 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 212 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 | | 1,28 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 7,75 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12018 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 7,75 | | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12018 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|----------|-----------|-------------|------|----------|--|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.20 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,00 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,06 | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 212 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 5,82 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12019 - 0 | | | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 5,82 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12019 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.20 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|----|----|------|-----------|----|--------|-------|-----|------------|---|-----------|-------------|--------|--------|--|
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,30 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 18,31 | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 13,26 | | | |
| 4898 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | 5133 | 11,53 | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | | |
| 164 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,64 | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,68 | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,84 | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 4,80 | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 53,66 | | |
| SX1 | SULPHUREX GH/F | | | | 12020 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 53,66 | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 12020 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|----------|-------|---------|--|-------------|--|-----------|--|----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.21 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,60 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 14,42 | | | | | | | | | | | | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 13,26 | | | | | | | | | | | | | | |
| 4898 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | 5133 | 11,53 | | | | | | | | | | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 8,80 | | | | | | | | | | | | | | |
| 5072 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Blind + Disk ASME B16.5 - TA 50.63/3 (DISK) 150 LB RF (125÷250 AARH) Forged FLG: ASTM A 105 Galvanized - DISK: A240 TYPE 304 | 5135 | 2,80 | | | | | | | | | | | | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,68 | | | | | | | | | | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 4,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 1,92 | | | | | | | | | | | | | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,84 | | | | | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 16,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 3,68 | | | | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 7,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 4,80 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 62,73 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12021 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 62,73 | | | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| KV_12.4 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 12021 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.21 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-----|-----|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 0,90 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 23,65 | | |
| 1462 | 12 | 0 | In | 4,78 | | mm | ,00 | 1,60 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 60,17 | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | |
| 5050 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5239 | 28,80 | | |
| 477 | 10 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 37,00 | | |
| 478 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 28,00 | | |
| 1686 | 12 | 10 | In | 4,78 | 3,96 | mm | ,00 | 1,00 | NR | 206 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 7,55 | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | |
| 5232 | 7/8 | 0 | In | | | mm | 120,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 7,08 | | |
| 5239 | 7/8 | 0 | In | | | mm | 190,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 9,36 | | |
| 672 | 12 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 202,09 | | |

| | | | | | | | | | | |
|-----|----------------|--|--|--|-----------|-----|-----|-------|-----------|--------|
| SX1 | SULPHUREX GH/F | | | | 12023 - 0 | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 202,09 |
|-----|----------------|--|--|--|-----------|-----|-----|-------|-----------|--------|

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12023 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.21 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,29 | | | | | | | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 12,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 30,64 | | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 1,43 | | | | | | | | | | | |
| 4909 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Sight Glass ST.46354/2 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 65 | 5126 | 5,71 | | | | | | | | | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 3,20 | | | | | | | | | | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,55 | | | | | | | | | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,65 | | | | | | | | | | | |
| 5126 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | | | | | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,44 | | | | | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 45,35 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12024 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 45,35 | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| KV_12.3 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 12024 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.21 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|-----|----|------|-----------|----|--------|-------|-----|------------|---|-----------|-------------|--------|------------------|
| 1448 | 16 | 0 | In | 4,78 | | mm | ,00 | 2,50 | m | 244 | Pipe ASME B36.10 PL E.R.W. ASTM A 312 TP 304 | | 120,76 | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 244 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,30 | m | 244 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,77 | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | |
| 513 | 16 | 0 | In | | | mm | ,00 | 3,00 | NR | 244 | Flange Slip-On ASME B16.5 150 LB ST (63÷125 AARH) Forged ASTM A 182 GR. F304 | 5351 | 140,81 | | |
| 541 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Flange Slip-On ASME B16.5 150 LB SG (63÷125 AARH) Forged ASTM A 182 GR. F304 | 5351 | 46,94 | | |
| 373 | 16 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 244 | 90° Elbow Long Radius ASME B16.9 BE Welded ASTM A 403 GR. WP304 | | 91,40 | | |
| 1051 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 244 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,61 | | |
| 4390 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 244 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,03 | | |
| 5351 | 1 | 0 | In | | | mm | 140,00 | 48,00 | NR | 244 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 320 GR B8 CL.2 / A194 GR 8 | | 84,00 | | |
| 778 | 16 | 0 | In | | | mm | ,00 | 3,00 | NR | 244 | Gasket TA 50.5/31 150 LB ST-SG (63÷125AARH) _ E11H Corrugate Metal Gasket E11H | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 485,78 | | |
| SX1 | SULPHUREX GH/F | | | | 12025 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: 485,78 |

| | | | | | | | | |
|-----------------------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| TET_12.5.A TET_12.5.B GC_36 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 244 | Welding specification | SP.1406/2-SP.1408/2 | |
| | Line | 12025 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.21 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|-----|----|------|----|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1448 | 16 | 0 | In | 4,78 | | mm | ,00 | 1,00 | m | 244 | Pipe ASME B36.10 PL E.R.W. ASTM A 312 TP 304 | | 48,30 | | |
| 1451 | 24 | 0 | In | 6,35 | | mm | ,00 | 4,10 | m | 244 | Pipe ASME B36.10 PL E.R.W. ASTM A 312 TP 304 | | 395,18 | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,50 | m | 244 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,94 | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | m | 244 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 2,55 | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 244 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,41 | | |
| 513 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Flange Slip-On ASME B16.5 150 LB ST (63÷125 AARH) Forged ASTM A 182 GR. F304 | 5351 | 46,94 | | |
| 373 | 16 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 244 | 90° Elbow Long Radius ASME B16.9 BE Welded ASTM A 403 GR. WP304 | | 45,70 | | |
| 376 | 24 | 0 | In | 6,35 | | mm | ,00 | 1,00 | NR | 244 | 90° Elbow Long Radius ASME B16.9 BE Welded ASTM A 403 GR. WP304 | | 137,36 | | |
| 3 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Cross Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,29 | | |
| 1051 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | |
| 1156 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F304 | | 0,15 | | |
| 1180 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 244 | Plug Hex. TA 50.7/2 THRD-M NPT 3000# Forged ASTM A 182 GR. F304 | | 0,27 | | |
| 1182 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Plug Hex. TA 50.7/2 THRD-M NPT 3000# Forged ASTM A 182 GR. F304 | | 0,36 | | |
| 4390 | 1/2 | 1/4 | In | | | mm | ,00 | 2,00 | NR | 244 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,06 | | |
| 5351 | 1 | 0 | In | | | mm | 140,00 | 16,00 | NR | 244 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 320 GR B8 CL.2 / A194 GR 8 | | 28,00 | | |
| 778 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 244 | Gasket TA 50.5/31 150 LB ST-SG (63÷125AARH) _ E11H Corrugate Metal Gasket E11H | | | | |

| | | | | | | | |
|--|------------------|-------|----------------|--------------|-------|-----------------------|---------------------|
| 12Y7 Disk plate ø 630mm. Thk.5mm -AISI 304 = n 1 pz | Plant | SX1 | SULPHUREX GH/F | Piping Class | 244 | Welding specification | SP.1406/2-SP.1408/2 |
| | Line | 12026 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|--|------------------------|-----|----|------------|-----------|-----------|--|----------|--|-------------|-----------|-------------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.47.21 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 707,81 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12026 - 0 | | | | SX1 | SX1 | | 1 / 1 | | TOTAL Kg: | | 707,81 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 12Y7 Disk plate ø 630mm. Thk.5mm -AISI 304 = n 1 pz | Plant | SX1 | SULPHUREX GH/F | Piping Class | 244 | Welding specification | SP.1406/2-SP.1408/2 |
| | Line | 12026 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | | Page 2 |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|------------------------|-------|-----|------------|--|-----------|-------------|-----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.21 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1462 | 12 | 0 | In | 4,78 | | mm | ,00 | 9,00 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 338,44 | | | | | | | | | | |
| 306 | 12 | 0 | In | 4,78 | | mm | ,00 | 3,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 81,31 | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 28,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 21,84 | | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | |
| 801 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 441,59 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12027 - 0 | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 441,59 | | | | | | | |

BLIND FLANGE 14" - ANSI 150# DRILLED ø12"- ASTM A 105 Gr I = N 1pz
BLIND FLANGE 16" - ANSI 150# DRILLED ø12"- ASTM A 105 Gr I = N 1pz

Plant SX1 SULPHUREX GH/F
Line 12027 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 209
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/2
System
De pres
Isometric code

Op tem
Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.22 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 6,00 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 32,62 | | | | | | | | | | |
| 3121 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 4,70 | | | | | | | | | | |
| 470 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5199 | 2,20 | | | | | | | | | | |
| 159 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,31 | | | | | | | | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,99 | | | | | | | | | | |
| 5199 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,84 | | | | | | | | | | |
| 664 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 42,67 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12028 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 42,67 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12028 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|-----|---------------------|------|----|-----------|------------------------|-------|----|------------|--|-----------|-------------|----------|-----------|--------|------------|--|
| PUMA5 | | | 13/04/2010 11.47.22 | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 207 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 207 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | |
| 5695 | 12 | 0 | In | 4,78 | | mm | ,00 | 6,50 | m | 207 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B RX 20% | | 244,43 | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | |
| 525 | 12 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Flange Slip-On ASME B16.5 150 LB ST (63÷125 AARH) Forged ASTM A 105 | 5232 | 56,00 | | | | | |
| 306 | 12 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 207 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 54,21 | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 207 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | |
| 5232 | 7/8 | 0 | In | | | mm | 120,00 | 24,00 | NR | 207 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 14,16 | | | | | |
| 776 | 12 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Gasket TA 50.5/31 150 LB ST-SG (63÷125AARH) _ E11H Corrugate Metal Gasket E11H | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 369,83 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 12029 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 369,83 | | |

| | | | | | | |
|----------------------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| 12Y19 TET_12.1.11 | Plant | SX1 SULPHUREX GH/F | Piping Class | 207 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 12029 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.22 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 16,00 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 661,65 | | | | | | | | | | | |
| 5703 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Valve Butterfly ST.46562/2 WAFER 86 psi FF (125÷250 AARH) | 5225 | | | | | | | | | | | | |
| | | | | | | | | | | | Forged ASTM A 105 B 83 | | | | | | | | | | | | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 4,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | | | | | | | | | | |
| 5570 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 209 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 34,13 | | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 3,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 102,39 | | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 36,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 28,08 | | | | | | | | | | | |
| 5225 | 3/4 | 0 | In | | | mm | 170,00 | 12,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 13,44 | | | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 4,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 839,68 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12030 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 839,68 | | | | | | | | | |

| | | | | | | |
|------------------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| 12Y15 KV_11.8 | Plant | SX1 SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 12030 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | REV: | | 13/04/2010 | | | | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|------------|--|-----------|--|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.22 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 3,50 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 30,50 | | | | | | | | | | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 3,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 17,87 | | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | | | | | | | |
| 5046 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5210 | 13,40 | | | | | | | | | | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 11,20 | | | | | | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 3,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 16,80 | | | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,13 | | | | | | | | | | | |
| 340 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 1,40 | | | | | | | | | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,15 | | | | | | | | | | | |
| 1221 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 1,25 | | | | | | | | | | | |
| 5210 | 5/8 | 0 | In | | | mm | 145,00 | 16,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 4,80 | | | | | | | | | | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 16,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 4,00 | | | | | | | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 106,21 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12032 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 106,21 | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 12032 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|---|-----------|-------------|----------|-----------|-------------|------|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.22 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,50 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,16 | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7//ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | |
| 691 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 4,38 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 12033 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 4,38 | | | | | | |

| | | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 | |
| | Line | 12033 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|--|-----|-------|--|--|------------|--|-------------|-----------|-------------|--|-----------|--------|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.47.22 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,10 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | | 5,19 | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | | | | | 5191 | 0,80 | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 8,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | | | | 0,88 | | | | | |
| 691 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 6,87 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 12034 - 0 | | | | | SX1 | SX1 | 1 / 1 | | | | | TOTAL Kg: | | 6,87 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12034 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|------------------------|-------|-----|------------|--|-----------|-------------|------------------|-----------|---------|--------|------------|--|-----------|--|----------|--|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | | |
| PUMA5 | | | 13/04/2010 11.47.22 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1467 | 24 | 0 | In | 6,35 | | mm | ,00 | 1,20 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 113,36 | | | | | | | | | | | |
| 1556 | 36 | 0 | In | 6,0 | | mm | ,00 | 47,00 | m | 209 | Pipe TA 50.83/6 PL Welded ASTM A 515 GRADE 70 | | 6.314,34 | | | | | | | | | | | |
| 3211 | 36 | 0 | In | 6,0 | | mm | ,00 | 1,00 | NR | 209 | 90° Miter TA 50.84/6 BE Welded ASTM A 515 GRADE 70 R=1.5 D | | 303,60 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 6731,3 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12035 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 6731,3 | | | | | | | |

12Y23
12Y24
WIRE NET FOR.... MESH 2,54x1mm - C.S. GALV. =
mq 4,0

Plant SX1 SULPHUREX GH/F
Line 12035 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 209
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/2
System
De pres
Isometric code

Op tem
Page 1

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.23 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|----|----|------|-----------|----|--------|------|-----|------------|---|-----------|-------------|--------|--------|--|
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,72 | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,60 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,77 | | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,10 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 5,07 | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | |
| 5045 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5209 | 10,40 | | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 8,20 | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 12,30 | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | |
| 339 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,80 | | | |
| 1159 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,15 | | | |
| 1220 | 3 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,80 | | | |
| 5209 | 5/8 | 0 | In | | | mm | 140,00 | 8,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,32 | | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,92 | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 52,52 | | |
| SX1 | SULPHUREX GH/F | | | | 12036 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 52,52 | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 12036 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.23 | | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | | |
| 5574 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,40 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 99,25 | | | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | | | |
| 5701 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | | | | | | | | | | | | | |
| 5572 | 14 | 0 | In | 4,78 | | mm | ,00 | 2,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 68,26 | | | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | | |
| 1189 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Plug Hex. TA 50.7/2 THRD-M NPT 3000# Forged ASTM A 105 | | 0,35 | | | | | | | | | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 209 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 12,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 9,36 | | | | | | | | | | | | |
| 5702 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 178,25 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12037 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 178,25 | | | | | | | | | | |

| | | | | | | | |
|-------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 12Y21 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 12037 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|--|--|--|-----------|-----------|-------------|--|-----------|--------|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.23 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | | | | | | 16,64 | | | | | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | | | | | | 5384 | 13,26 | | | | | | | |
| 4898 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | | | | | | 5133 | 11,53 | | | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | | | | | | 5135 | 2,20 | | | | | | | |
| 164 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | | | | | | 0,32 | | | | | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | | | | | | 1,36 | | | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | | | | | | 0,48 | | | | | | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | 0,84 | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | 0,92 | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | | | | | | 4,80 | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 52,35 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12038 - 0 | | | | SX1 | SX1 | | | | 1 / 1 | | | | TOTAL Kg: | | 52,35 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 12038 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | | | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|--------|----------|--|-------------|-----------|----------|------|-----------|--|------------|--|--|--|
| PUMA5 | | | | 13/04/2010 11.47.23 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,50 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,16 | | | | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | | | |
| 691 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 4,38 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 12101 - 0 | | | | | SX1 | SX1 | 1 / 1 | | | | | TOTAL Kg: | | 4,38 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12101 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|---|-----------|-------------|--------|----------|--|-------------|-----------|----------|------|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.23 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 5,00 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 6,33 | | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7//ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | |
| 691 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 7,55 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 12102 - 0 | | | | | SX1 | SX1 | 1 / 1 | | | | | TOTAL Kg: | | 7,55 | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 12102 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|--------|--|-----------|----------|-------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.23 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 9,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 11,39 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 1077 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,12 | | | | | | | | | | | | | | |
| 1275 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,30 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 12,11 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12103 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 12,11 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 12103 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.23 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 5,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 6,33 | | | | | | | | | | | | | | |
| 390 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Flange ASME B16.5 THRD-F NPT 150 LB RF (125÷250 AARH) Forged ASTM A 105 Galvanized | 5125 | 0,40 | | | | | | | | | | | | | | |
| 1077 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,12 | | | | | | | | | | | | | | |
| 1275 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,30 | | | | | | | | | | | | | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 202 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | | | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 7,59 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 12104 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 7,59 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 12104 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.24 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 15,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 19,62 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,40 | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 9,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 2,25 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 30,11 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 12105 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 30,11 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 12105 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|----------|-------------|----------|-----------|------------|--|
| PUMA5 | | | 13/04/2010 11.47.24 | | | | | | | | | | | DOC: | 1E35-65-029 | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 16,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 20,25 | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | |
| 390 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 202 | Flange ASME B16.5 THRD-F NPT 150 LB RF (125÷250 AARH) Forged ASTM A 105 Galvanized | 5125 | 1,60 | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 8,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 3,20 | | | | | | |
| 1077 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,24 | | | | | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 8,00 | NR | 202 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,88 | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 26,47 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 12106 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 26,47 | | |

PCV_12.2
KY_12.1

Plant SX1 SULPHUREX GH/F
Line 12106 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 202
Fluid
Coating
Sketch Sht 1 / 1

Welding specification
System
De pres
Isometric code
Op tem

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.24 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|----|----|------|----|-----------|--------|-------|----|------------|--|------------------|--------------|--------|--------|
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 14,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 17,72 | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,29 | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | |
| 4999 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5125 | 3,06 | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 1,60 | | |
| 84 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | 45° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,32 | | |
| 224 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,41 | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 7,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,80 | | |
| 1077 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,24 | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,34 | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,44 | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 29,96 | | |
| SX1 | SULPHUREX GH/F | | | | | 12107 - 0 | | SX1 | | SX1 | 1 / 1 | TOTAL Kg: | 29,96 | | |

| | | | | | | | |
|----------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| PICV_12.1 KV_12.2 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 12107 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|-----------|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.24 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1463 | 14 | 0 | In | 6,35 | | mm | ,00 | 4,00 | m | 212 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 218,76 | | | | | | | | | | |
| 413 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Blind ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5249 | 59,00 | | | | | | | | | | |
| 479 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5249 | 36,00 | | | | | | | | | | |
| 480 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5250 | 46,00 | | | | | | | | | | |
| 307 | 14 | 0 | In | 6,35 | | mm | ,00 | 1,00 | NR | 212 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 45,34 | | | | | | | | | | |
| 1699 | 16 | 14 | In | 6,35 | 6,35 | mm | ,00 | 1,00 | NR | 212 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 22,03 | | | | | | | | | | |
| 1124 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | |
| 5249 | 1 | 0 | In | | | mm | 135,00 | 12,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 20,64 | | | | | | | | | | |
| 5250 | 1 | 0 | In | | | mm | 140,00 | 16,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 28,00 | | | | | | | | | | |
| 705 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | |
| 706 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 475,83 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 14001 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 475,83 | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| PI_14.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 14001 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.24 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 3,90 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 33,98 | | | | | | | | | | | | |
| 5046 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Butterfly With Gasket ST.46856/0 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 109 | 5210 | 6,70 | | | | | | | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 5,60 | | | | | | | | | | | | |
| 130 | 4 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 206 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 1,02 | | | | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,13 | | | | | | | | | | | | |
| 1124 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | | | |
| 5210 | 5/8 | 0 | In | | | mm | 145,00 | 8,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,40 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 53,9 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 14006 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 53,9 | | | | | | | | |

| | | | | | | | |
|-----------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 14Y1 PI_14.2 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 14006 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.25 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-----|----|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 12,50 | m | 209 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 67,96 | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 6,10 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 53,15 | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | |
| 470 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5199 | 4,40 | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 5,60 | | |
| 117 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 209 | 45° Elbow Long Radius ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,63 | | |
| 130 | 4 | 0 | In | 3,18 | | mm | ,00 | 1,00 | NR | 209 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 1,02 | | |
| 285 | 2 | 0 | In | 3,91 | | mm | ,00 | 4,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 2,66 | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 3,00 | NR | 209 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 6,20 | | |
| 1649 | 4 | 2 | In | 3,18 | 3,91 | mm | ,00 | 2,00 | NR | 209 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 1,72 | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | |
| 1122 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,03 | | |
| 5199 | 5/8 | 0 | In | | | mm | 85,00 | 8,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,68 | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | |
| 753 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 209 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5D FLAT | | | | |
| 756 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5D FLAT | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 147,64 | | |

| | | | | | |
|---------|--------------------------|--------------|-------|-----------------------|---------------------|
| TL_14.2 | Plant SX1 SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line 14007 - 0 | Fluid | | System | |
| | Dang. fluid type | Coating | | De pres | Op tem |
| | Area SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|----------------|---------------------|--|------------------------|----|--|-----------|-----|----|------------|-----------|------------------|-------|---------|--|------------|-----------|-----------|--------|----------|-----------|-------------|--------|--------|
| Ballestra | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | | | | |
| PUMA5 | | 13/04/2010 11.47.25 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | | | | |
| Ballestra | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch |
| SX1 | SULPHUREX GH/F | | | | | | 14007 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 147,64 | | | | | |

| | | | | | | | | | | | |
|---------|------------------|--------------------|--|--|--------------|-------|--|-----------------------|---------------------|---|--|
| TL_14.2 | Plant | SX1 SULPHUREX GH/F | | | Piping Class | 209 | | Welding specification | SP.1406/2-SP.1407/2 | | |
| | Line | 14007 - 0 | | | Fluid | | | | | | |
| | Dang. fluid type | | | | Coating | | | | | | |
| | Area | SX1 | | | Sketch Sht | 1 / 1 | | Isometric code | | | |
| | Zones | | | | | | | Op tem | | | |
| | | | | | | | | | Page | 2 | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|------|-----------|------------------------|-------|----|------------|--|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.25 | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,30 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,38 | | | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,30 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,07 | | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 0,20 | m | 212 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1,34 | | | | | | | | | | |
| 2843 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Valve Ball Full Port ST.46590/3 LUG 150 LB RF (125÷250 AARH) Forged ASTM A 105 S 127 | 5376 | 10,50 | | | | | | | | | | |
| 470 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5199 | 4,40 | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 4,10 | | | | | | | | | | |
| 1646 | 3 | 2 | In | 3,18 | 3,91 | mm | ,00 | 1,00 | NR | 212 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,57 | | | | | | | | | | |
| 5199 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,84 | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,92 | | | | | | | | | | |
| 696 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | |
| 698 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | |
| 5376 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 212 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 | | 2,40 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 32,52 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 14010 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 32,52 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 14010 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|-----|---------------------|------|------|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | 13/04/2010 11.47.25 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 12,70 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 16,08 | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,50 | | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | | | | | | |
| 1749 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 18,77 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 14014 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 18,77 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 14014 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 | |
|------------|----------------|-----|---------------------|------|------|-----------|--------|------------------------|----|------------|--|-----------|-------------|-------------|-----------|-----------|------------|--|
| PUMA5 | | | 13/04/2010 11.47.25 | | | | | | | | | | DOC: | 1E35-65-029 | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 12,30 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 15,57 | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,30 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,75 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | |
| 1749 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 205 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 19,39 | | | |
| SX1 | SULPHUREX GH/F | | | | | 14101 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 19,39 | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 14101 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|-----|---------------------|------|------|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.26 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 14,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 17,72 | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,50 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,40 | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | |
| 1749 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 205 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 27,08 | | | |
| SX1 | SULPHUREX GH/F | | | | | | 14102 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 27,08 | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 14102 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|-----|---------------------|------|------|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.26 | | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 12,40 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 15,70 | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,50 | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | |
| 1749 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 17,99 | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 14103 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 17,99 | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 14103 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|------------------|--------|-----------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.26 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,59 | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 7,89 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 14105 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 7,89 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 14105 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|------------------------|------|----|------------|--|-----|--|------------------|--|-----------|-----------|-------------|--|-----------|--------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.26 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 9,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | 11,39 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | | | | | | 5,10 | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | | | | | | 0,12 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 16,61 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 14107 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 16,61 | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 14107 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|--------|--|--|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.26 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 10,13 | | | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 5,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 2,00 | | | | | | | | | | | | | | |
| 1077 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,24 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 12,67 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 14108 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 12,67 | | | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 14108 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.26 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|------------------|--|--|--|-----------------------|--|--|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|--|--|-----------------------|--|--|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|----|----|------|----|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 22,00 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 89,08 | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,10 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 4,54 | | |
| 2857 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5382 | 7,14 | | |
| 5003 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5127 | 9,18 | | |
| 6035 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Strainer Y-Type ST.46350/5 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M F 72 | 5127 | 6,33 | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 7,00 | | |
| 469 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5193 | 1,40 | | |
| 158 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 212 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,18 | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 5,00 | NR | 212 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,84 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,38 | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 5,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 1,43 | | |
| 5193 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,48 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 10,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,20 | | |
| 695 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |

| | | | |
|---------|---------------------------------|-------------------------|--|
| PI_06.1 | Plant SX1 SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 16001 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|----|------------------------|-------|-----|------------|---|--|-------|----------|-----------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.47.26 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 5382 | 1/2 | 0 | In | | | mm | 35,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | | | | | | 1,28 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 132,43 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16001 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 132,43 | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PI_06.1 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16001 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.26 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|----|----|------|----|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 24,00 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 97,18 | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 6,20 | | |
| 2857 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5382 | 7,14 | | |
| 5003 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5127 | 9,18 | | |
| 6035 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Strainer Y-Type ST.46350/5 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M F 72 | 5127 | 6,33 | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 7,00 | | |
| 469 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5193 | 1,40 | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 5,00 | NR | 212 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,84 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,38 | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 5,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 1,43 | | |
| 5193 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,48 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,44 | | |
| 695 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 7,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5382 | 1/2 | 0 | In | | | mm | 35,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | |

| | | | |
|---------|---------------------------------|-------------------------|--|
| PI_06.3 | Plant SX1 SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 16002 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|--|------------------------|-----|-----|------------|-----------|-----------|-------|----------|-----------|-------------|--------|-----------|-------------|-----------|--------|------------|--|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | | |
| PUMA5 | | | 13/04/2010 11.47.27 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 142,23 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16002 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 142,23 | | | | | | | |

| | | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|--------|
| PI_06.3 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line | 16002 - 0 | Fluid | | System | | |
| | Dang. fluid type | | Coating | | De pres | Op tem | |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | | Page 2 |
| | Zones | | | | | | |

| Ballestra | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|-----------|------------------------|--------|----------------|-----|------------|---|--|--|--|-----------|-----------|--------|-------------|--|----------|-----------|-------------|--|------------|--------|
| PUMA5 | | | 13/04/2010 11.47.27 | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 25,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | | | | | | | | | | 103,29 | | | |
| 2857 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | | | | | | | | | | 5382 | 7,14 | | | |
| 5003 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | | | | | | | | | | 5127 | 9,18 | | | |
| 6035 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Strainer Y-Type ST.46350/5 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M F 72 | | | | | | | | | | 5127 | 6,33 | | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | | | | | | | | | | 5129 | 8,40 | | | |
| 163 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | | | | | | | | | | 0,38 | | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 5,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | | | | | | | | | | 1,88 | | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 6,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | | | | | | | | | | 1,71 | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | | | | | 0,96 | | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | | | | | 1,44 | | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 7,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| 5382 | 1/2 | 0 | In | | | mm | 35,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | | | | | | | | | | 1,28 | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 141,99 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16003 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 141,99 | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PI_06.2 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16003 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-------|---------------------|------|------|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.27 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,30 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,39 | | | | | | | | | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 7,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 38,83 | | | | | | | | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 6,63 | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 6,60 | | | | | | | | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,68 | | | | | | | | | | |
| 1775 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 2,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,88 | | | | | | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 1,44 | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,84 | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 60,4 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16004 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 60,4 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16004 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|-----|------------|---|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.27 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 0,20 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1,34 | | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 4,50 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 39,21 | | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,13 | | | | | | | | | | |
| 1651 | 4 | 3 | In | 3,18 | 3,18 | mm | ,00 | 1,00 | NR | 206 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,86 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 45,55 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16005 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 45,55 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16005 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.27 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 16,64 | | | | | | | | | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 6,63 | | | | | | | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 6,60 | | | | | | | | | | | |
| 164 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,32 | | | | | | | | | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 1,36 | | | | | | | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 1,44 | | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,84 | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 37,23 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16006 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 37,23 | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16006 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.27 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|--------|----|------------|---|-----------|-------------|--------|--------|
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,28 | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 5,50 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 32,76 | | |
| 6032 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5385 | 42,85 | | |
| 2864 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 1,43 | | |
| 452 | 2+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5136 | 10,80 | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 16,80 | | |
| 2491 | 2+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Drip Ring TA 50.65/3 WAFER 150 LB FF (125÷250 AARH) Forged ASTM A 182 GR. F304 | 5140 | 6,73 | | |
| 340 | 4 | 0 | In | 2,11 | | mm | ,00 | 6,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 8,40 | | |
| 1794 | 4 | 2+1/2 | In | 2,11 | 2,11 | mm | ,00 | 3,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 1,74 | | |
| 1795 | 4 | 3 | In | 2,11 | 2,11 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 1219 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,97 | | |
| 1221 | 4 | 0 | In | 2,11 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 1,87 | | |
| 5134 | 5/8 | 0 | In | | | mm | 90,00 | -12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | -2,64 | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,76 | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 16,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 4,00 | | |

| | | | | |
|--|-------------------------|-----------------------|-------------------------|--|
| | Plant SX1 | SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 16007 - 0 | | Fluid | System |
| | Dang. fluid type | | Coating | De pres |
| | Area SX1 | | Sketch Sht 1 / 1 | Op tem |
| | Zones | | | Isometric code |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|----|----|-----------|------------------------|-------|----|------------|---|-----------|-------------|----------|-----------|-------------|--------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.27 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 5140 | 5/8 | 0 | In | | | mm | 125,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 3,24 | | | | | | | | | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 64,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 10,24 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 143,82 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 16007 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 143,82 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16007 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | Page 2 |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.28 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 13,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 72,12 | | | | | | | | | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 13,26 | | | | | | | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 11,00 | | | | | | | | | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 7,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 4,75 | | | | | | | | | | | |
| 1773 | 2 | 1 | In | 3,91 | 3,38 | mm | ,00 | 2,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,88 | | | | | | | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 5,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 2,39 | | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,76 | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 4,80 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 111,97 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16008 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 111,97 | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16008 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.28 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 5,30 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 6,85 | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,10 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 4,54 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 7,40 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 41,05 | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 0,40 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 2,38 | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 33,16 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 2,40 | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 3,20 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 10,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 22,00 | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 9,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 6,10 | | |
| 1773 | 2 | 1 | In | 3,91 | 3,38 | mm | ,00 | 5,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 2,19 | | |
| 1775 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |
| 2218 | 4 | 2 | In | 2,11 | 3,91 | mm | ,00 | 2,00 | NR | 215 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 1,16 | | |
| 1049 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | |
| 1051 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | |

| | | | | | |
|--------------------------------|---|--|--|--------|--------|
| TET_16.2 FV_16.3 FE_16.3 | Plant SX1 SULPHUREX GH/F Line 16009 - 0 Dang. fluid type Area SX1 Zones | Piping Class 215 Fluid Coating Sketch Sht 1 / 1 | Welding specification SP.1406/2-SP.1408/3 System De pres Isometric code | Op tem | Page 1 |
|--------------------------------|---|--|--|--------|--------|

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.28 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,51 | | | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,65 | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 10,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 4,79 | | | | | |
| 1286 | 1/2 | 0 | In | | | mm | ,00 | 7,00 | NR | 215 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F304 | | 2,71 | | | | | |
| 4543 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,77 | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 24,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,88 | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 16,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,92 | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 20,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 4,60 | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 10,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 80,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 12,00 | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 157,71 | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16009 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 157,71 | | | | |

| | | | | | | | | |
|--------------------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| TET_16.2 FV_16.3 FE_16.3 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line | 16009 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 2 | |
| | Zones | | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | 13/04/2010 11.47.28 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1526 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 3,76 | | | | | | | | | | | |
| 452 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5136 | 3,60 | | | | | | | | | | | |
| 2491 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Drip Ring TA 50.65/3 WAFER 150 LB FF (125÷250 AARH) Forged ASTM A 182 GR. F304 | 5140 | 2,24 | | | | | | | | | | | |
| 1219 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,32 | | | | | | | | | | | |
| 5134 | 5/8 | 0 | In | | | mm | 90,00 | -4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | -0,88 | | | | | | | | | | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | | | | | | | | | | |
| 5140 | 5/8 | 0 | In | | | mm | 125,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,08 | | | | | | | | | | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 11,05 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 16010 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 11,05 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16010 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----|--|-------|-----------|-----------|-------------|-------------|----------|--------|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.28 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | |
| 1526 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | | | | | | 0,75 | | | | | | |
| 452 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | | | | | | 5136 | 3,60 | | | | | | |
| 2491 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Drip Ring TA 50.65/3 WAFER 150 LB FF (125÷250 AARH) Forged ASTM A 182 GR. F304 | | | | | | 5140 | 2,24 | | | | | | |
| 1219 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | | | | | | 0,32 | | | | | | |
| 5134 | 5/8 | 0 | In | | | mm | 90,00 | -4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | -0,88 | | | | | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | 0,92 | | | | | | |
| 5140 | 5/8 | 0 | In | | | mm | 125,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | 1,08 | | | | | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | Total Kg: | | 8,04 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16011 - 0 | | | | SX1 | SX1 | | 1 / 1 | | TOTAL Kg: | | 8,04 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16011 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.28 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 4,50 | m | 206 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 30,25 | | | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 8,20 | | | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 4,00 | NR | 206 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,71 | | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 45, | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16012 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 45, | | | | | | | | | | |

| | | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|--|
| KV_16.20 | Plant | SX1 SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 | |
| | Line | 16012 - 0 | Fluid | | System | | |
| | Dang. fluid type | | Coating | | De pres | Op tem | |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|-----|---------------------|------|----|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.28 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | | | | |
| 1533 | 12 | 0 | In | 3,96 | | mm | ,00 | 4,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 127,48 | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | |
| 459 | 12 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5158 | 112,00 | | | | | |
| 345 | 12 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 45,82 | | | | | |
| 1051 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | | | | |
| 1226 | 12 | 0 | In | 3,96 | | mm | ,00 | 4,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 23,60 | | | | | |
| 4390 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,03 | | | | | |
| 5158 | 7/8 | 0 | In | | | mm | 140,00 | 48,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 30,72 | | | | | |
| 723 | 12 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 340,67 | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16013 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 340,67 | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| KV_16.1 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16013 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.29 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 3,06 | | | | | | | | | | | |
| 1534 | 14 | 0 | In | 3,96 | | mm | ,00 | 1,50 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 52,56 | | | | | | | | | | | |
| 2864 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 1,43 | | | | | | | | | | | |
| 460 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5168 | 84,00 | | | | | | | | | | | |
| 1119 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,15 | | | | | | | | | | | |
| 1227 | 14 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 13,01 | | | | | | | | | | | |
| 5168 | 1 | 0 | In | | | mm | 155,00 | 24,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 44,16 | | | | | | | | | | | |
| 724 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 198,37 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16014 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 198,37 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16014 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.29 | | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1534 | 14 | 0 | In | 3,96 | | mm | ,00 | 2,40 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 84,09 | | | | | | | | | | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 0,20 | | | | | | | | | | | | |
| 460 | 14 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5168 | 126,00 | | | | | | | | | | | | |
| 346 | 14 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 28,85 | | | | | | | | | | | | |
| 1115 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,03 | | | | | | | | | | | | |
| 1119 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,15 | | | | | | | | | | | | |
| 1227 | 14 | 0 | In | 3,96 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 19,52 | | | | | | | | | | | | |
| 5168 | 1 | 0 | In | | | mm | 155,00 | 24,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 44,16 | | | | | | | | | | | | |
| 724 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 303, | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16015 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 303, | | | | | | | | | | |

| | | | | | | | |
|------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 16Y1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16015 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|---------------------|------------------------|----|------|------|----|-----------|----------------|----|------------|--|-----------|-------------|----------|-----------|------------|
| PUMA5 | 13/04/2010 11.47.29 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| 1463 | 14 | 0 | In | 6,35 | | mm | ,00 | 19,80 | m | 212 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1.082,85 | | | |
| 1464 | 16 | 0 | In | 6,35 | | mm | ,00 | 0,30 | m | 212 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 18,79 | | | |
| 480 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5250 | 46,00 | | | |
| 307 | 14 | 0 | In | 6,35 | | mm | ,00 | 1,00 | NR | 212 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 45,34 | | | |
| 308 | 16 | 0 | In | 6,35 | | mm | ,00 | 1,00 | NR | 212 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 59,50 | | | |
| 1699 | 16 | 14 | In | 6,35 | 6,35 | mm | ,00 | 1,00 | NR | 212 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 22,03 | | | |
| 5250 | 1 | 0 | In | | | mm | 140,00 | 16,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 28,00 | | | |
| 706 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 1302,52 | | |
| SX1 | SULPHUREX GH/F | | | | | | 16016 - 0 | SX1 | | SX1 | 1 / 1 | TOTAL Kg: | | 1302,52 | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16016 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.29 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|------|----|--------|------|----|------------|--|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,13 | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 0,60 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 2,76 | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 11,91 | | |
| 4900 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | 5135 | 26,53 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 8,20 | | |
| 1795 | 4 | 3 | In | 2,11 | 2,11 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 2218 | 4 | 2 | In | 2,11 | 3,91 | mm | ,00 | 1,00 | NR | 215 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 1051 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | |
| 1119 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,15 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | |
| 1220 | 3 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,80 | | |
| 4539 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,84 | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,92 | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |

| | | | |
|---------------------|--------------------------|------------------|---|
| LT_16.1 TET_16.7 | Plant SX1 SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 16017 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|----|------------------------|------|-----|------------|--|--|-------|----------|-----------|-------------|-----------|-------------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.47.29 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 58,78 | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16017 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 58,78 | | | | | | |

| | | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|--------|
| <div>LT_16.1</div> <div>TET_16.7</div> | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line | 16017 - 0 | Fluid | | System | | |
| | Dang. fluid type | | Coating | | De pres | Op tem | |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | | Page 2 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.29 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-------|-------|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,60 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,77 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 12,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 67,68 | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 33,16 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 11,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 24,20 | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 7,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 4,75 | | |
| 1773 | 2 | 1 | In | 3,91 | 3,38 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |
| 1775 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 2,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,88 | | |
| 1049 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 11,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 5,27 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 24,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 5,52 | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 11,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 80,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 12,00 | | |
| M Erection | | | | | | | | | | | | Total Kg: | 155,99 | | |

| | | | | | | | |
|-----|----------------|-----------|-----|-----|-------|-----------|--------|
| SX1 | SULPHUREX GH/F | 16018 - 0 | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 155,99 |
|-----|----------------|-----------|-----|-----|-------|-----------|--------|

| | | | | | | |
|--------------------|--------------------------|--------------|-------|-----------------------|---------------------|--|
| PI_16.4 FE_16.4 | Plant SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line 16018 - 0 | Fluid | | System | | |
| | Dang. fluid type | Coating | | De pres | Op tem | |
| | Area SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.29 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-----|----|----|------|----|----|--------|------|----|------------|--|-----------|-------------|--------|--------|
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,50 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 6,26 | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 212 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | |
| 693 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 7,63 | | |

| | | | | | | | | | | |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|------|
| SX1 | SULPHUREX GH/F | | 16019 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 7,63 |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|------|

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16019 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|--|-------|--|----------|--|-----------|--|-------------|-----------|-------------|--|----------|--------|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.30 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,70 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | | | | | | | | | | 20,53 | | | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | | | | | | | | | | 5384 | 13,26 | | | | | |
| 4898 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | | | | | | | | | | 5133 | 11,53 | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | | | | | | | | | | 5135 | 11,00 | | | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | | | | | | | | | | 2,03 | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 5,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | | | | | | | | | | 2,39 | | | | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | | | | | 0,84 | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | | | | | 2,76 | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | | | | | | | | | | 4,80 | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | | | | | | | | | 69,15 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16020 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 69,15 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16020 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.30 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-------|-------|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,60 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,77 | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 19,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 80,57 | | |
| 2857 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5382 | 21,43 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 5003 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5127 | 9,18 | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 9,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 12,60 | | |
| 163 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,38 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 12,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 4,51 | | |
| 1775 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 9,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 2,57 | | |
| 4539 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 24,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,88 | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 10,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5382 | 1/2 | 0 | In | | | mm | 35,00 | 48,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 3,84 | | |
| M Erection | | | | | | | | | | | | Total Kg: | 140,48 | | |

| | | | | | | | |
|-----|----------------|-----------|-----|-----|-------|-----------|--------|
| SX1 | SULPHUREX GH/F | 16024 - 0 | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 140,48 |
|-----|----------------|-----------|-----|-----|-------|-----------|--------|

| | | | | | | |
|----------------------------------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PCV_33.2 FO_33.11 PI_33.11 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16024 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | |
|-----------|---------------------|------------------------|--|--|--|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.30 | | | | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|----|----|------|-----------|----|--------|-------|-----|------------|---|-----------|-------------|--------|--------|--|
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 8,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 20,43 | | | |
| 2855 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 2,86 | | | |
| 5001 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5126 | 4,59 | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 3,20 | | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,55 | | | |
| 1773 | 2 | 1 | In | 3,91 | 3,38 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,65 | | | |
| 5126 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 35,39 | | |
| SX1 | SULPHUREX GH/F | | | | 16025 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 35,39 | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16025 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|-------------|-----------|-----------|-------|------------|--|
| PUMA5 | | | 13/04/2010 11.47.30 | | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,40 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,51 | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,50 | m | 212 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 10,08 | | | | | | |
| 399 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Blind ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 4,10 | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 5,00 | NR | 212 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 5,88 | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,92 | | | | | | |
| 691 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | |
| 698 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 22,85 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 16026 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 22,85 | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16026 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|-----------|------------------------|-------|----|------------|---|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.30 | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,65 | | | | | | | | | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 4,61 | | | | | | | | | | |
| 6030 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5385 | 14,28 | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | | | | | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 4,10 | | | | | | | | | | |
| 171 | 3 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,82 | | | | | | | | | | |
| 1220 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,40 | | | | | | | | | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | | | | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,56 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 29,09 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 16027 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 29,09 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16027 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.30 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1507 | 1+1/4 | 0 | In | 3,56 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,69 | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 10,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 43,38 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 4,80 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 26,63 | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 13,26 | | |
| 5004 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5133 | 11,22 | | |
| 447 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,70 | | |
| 449 | 1+1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 1,10 | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 1,40 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 13,20 | | |
| 2491 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Drip Ring TA 50.65/3 WAFER 150 LB FF (125÷250 AARH) Forged ASTM A 182 GR. F304 | 5140 | 2,24 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,38 | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,68 | | |
| 1769 | 1+1/2 | 3/4 | In | 3,68 | 2,87 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,26 | | |
| 1774 | 2 | 1+1/4 | In | 3,91 | 3,56 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |
| 1775 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |

| | | | | |
|---------|-------------------------|-----------------------|-------------------------|--|
| PI_16.8 | Plant SX1 | SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 16028 - 0 | | Fluid | System |
| | Dang. fluid type | | Coating | De pres |
| | Area SX1 | | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | | Op tem |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.30 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|----|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1790 | 2+1/2 | 2 | In | 2,11 | 3,91 | mm | ,00 | 2,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,65 | | |
| 1208 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,10 | | |
| 1210 | 1+1/4 | 0 | In | 3,56 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,22 | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,29 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 6,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 2,87 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,84 | | |
| 5134 | 5/8 | 0 | In | | | mm | 90,00 | -4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | -0,88 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,76 | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,46 | | |
| 5140 | 5/8 | 0 | In | | | mm | 125,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,08 | | |
| 711 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 713 | 1+1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |

| | | | |
|---------|---------------------------------|-------------------------|--|
| PI_16.8 | Plant SX1 SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 16028 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Op tem |
| | Zones | Isometric code | Page 2 |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|----|----|----|------------------------|-------|-----|------------|---|-----------|-------------|----------|-----------|-------------|--------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.31 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 4,80 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 130,66 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16028 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 130,66 | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PI_16.8 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16028 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 3 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.31 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 22,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 124,83 | | | | | | | | | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 6,63 | | | | | | | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 6,60 | | | | | | | | | | | |
| 164 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,64 | | | | | | | | | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 5,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 3,39 | | | | | | | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 1,44 | | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,84 | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 147,76 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16029 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 147,76 | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16029 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.31 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,28 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 19,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 108,18 | | |
| 2855 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 2,86 | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 13,26 | | |
| 4898 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | 5133 | 11,53 | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 1,60 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 12,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 26,40 | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,14 | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 6,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 4,07 | | |
| 1773 | 2 | 1 | In | 3,91 | 3,38 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,32 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 12,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 5,75 | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,84 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 32,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,36 | | |

| | | | | | | |
|---------|------------------|----------------|--------------|-------|-----------------------|---------------------|
| KV_12.5 | Plant SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16030 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|-----------|----------|--------|-------------|--|----------|--|-----------|------------|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
| PUMA5 | | | | 13/04/2010 11.47.31 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 11,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 4,80 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 190,59 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16030 - 0 | | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 190,59 | | | | | | | | |

| | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| KV_12.5 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16030 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | Page 2 |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.31 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|-----|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 3,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 3,87 | | |
| 1505 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 18,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 31,84 | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 5,11 | | |
| 2863 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,92 | | |
| 4894 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | 5125 | 4,59 | | |
| 4999 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5125 | 3,06 | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 1,20 | | |
| 447 | 3/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 1,40 | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 0,80 | | |
| 160 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 1,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,03 | | |
| 224 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,41 | | |
| 328 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 9,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,79 | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,14 | | |
| 1762 | 3/4 | 1/2 | In | 2,87 | 2,77 | mm | ,00 | 2,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,12 | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,25 | | |

| | | | |
|----------|---------------------------------|-------------------------|--|
| PSV_16.3 | Plant SX1 SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 16032 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-------|-----------|-------------|-------|-------------|--------|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.31 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | | | | |
| 1208 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | | 0,20 | | | | | | | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | | 0,16 | | | | | | | | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | 0,88 | | | | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 16,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | 1,92 | | | | | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | 0,48 | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 711 | 3/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 58,17 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16032 - 0 | | SX1 | SX1 | | 1 / 1 | | TOTAL Kg: | | 58,17 | | | | | | | |

| | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PSV_16.3 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16032 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|-------------|----------|-----------|----------|------------|
| PUMA5 | | | 13/04/2010 11.47.31 | | | | | | | | | | | | DOC: | 1E35-65-029 | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 10,21 | | | | | | | |
| 2855 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 2,86 | | | | | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 1,60 | | | | | | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,14 | | | | | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,32 | | | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 16,89 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16033 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 16,89 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16033 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|--------|--|-----------|----------|-------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.32 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,80 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,03 | | | | | | | | | | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,40 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,02 | | | | | | | | | | | | | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 7,50 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 44,67 | | | | | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | | | | | | | | | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 5,60 | | | | | | | | | | | | | | |
| 172 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 1,38 | | | | | | | | | | | | | | |
| 340 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 1,40 | | | | | | | | | | | | | | |
| 1051 | 1 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,92 | | | | | | | | | | | | | | |
| 1156 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F304 | | 0,15 | | | | | | | | | | | | | | |
| 1221 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,62 | | | | | | | | | | | | | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,00 | | | | | | | | | | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 59,51 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16035 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 59,51 | | | | | | | | |

| | | | | | | |
|-----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| TET_16.11 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16035 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|----|------------------------|-------|-----|------------|--|-----------|-------------|-----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.32 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,80 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,03 | | | | | | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | | | | | | | | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 11,91 | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | | | | | | |
| 4901 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | 5135 | 73,47 | | | | | | | | | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 28,00 | | | | | | | | | | |
| 340 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 1,40 | | | | | | | | | | |
| 1051 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | | | | | | | | | |
| 1156 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F304 | | 0,15 | | | | | | | | | | |
| 1221 | 4 | 0 | In | 2,11 | | mm | ,00 | 5,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 3,12 | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 16,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 3,68 | | | | | | | | | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 24,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 6,00 | | | | | | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 130,04 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16036 - 0 | | SX1 | SX1 | | 1 / 1 | | TOTAL Kg: | | 130,04 | | | | | | | |

| | | | | | | |
|-----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| TET_16.15 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16036 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.32 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|----|----|-----------|------|----|--------|------|-------|------------|--|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 7,75 | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,28 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,11 | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 2,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 9,22 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 2864 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 1,43 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 4,40 | | |
| 171 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,41 | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,14 | | |
| 339 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,80 | | |
| 1791 | 3 | 2 | In | 2,11 | 3,91 | mm | ,00 | 2,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,78 | | |
| 1117 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,06 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,96 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,84 | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 30,87 | | |
| SX1 | SULPHUREX GH/F | | | 16037 - 0 | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | 30,87 | | |

| | | | |
|---------|--------------------------|------------------|---|
| PL_16.7 | Plant SX1 SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 16037 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.32 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,51 | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 4,61 | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 5,96 | | |
| 6030 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5385 | 14,28 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 8,20 | | |
| 339 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,80 | | |
| 1793 | 4 | 2 | In | 2,11 | 3,91 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 1795 | 4 | 3 | In | 2,11 | 2,11 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 1051 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | |
| 1220 | 3 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,80 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,56 | | |

| | | | |
|---------|--------------------------|------------------|---|
| TL_16.3 | Plant SX1 SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 16038 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|--|------------------------|-----|-----|------------|-----------|-----------|-------|------------------|-----------|---------|-------|------------|-------------|-----------|--------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.32 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 43,74 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16038 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 43,74 | | | | | | |

| | | | | | | | |
|---------|------------------|--------------------|--------------|-------|-----------------------|---------------------|--------|
| TL_16.3 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line | 16038 - 0 | Fluid | | System | | |
| | Dang. fluid type | | Coating | | De pres | Op tem | |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | | Page 2 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.32 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|------|----|--------|------|----|------------|--|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | |
| 1505 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,72 | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,51 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,10 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 17,20 | | |
| 4898 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | 5133 | 11,53 | | |
| 447 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,70 | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 0,80 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | |
| 328 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,09 | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 1,36 | | |
| 1773 | 2 | 1 | In | 3,91 | 3,38 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |
| 1049 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | |
| 1208 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,10 | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,16 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,24 | | |

| | | | | | | | |
|---------------------|-------------------------|-------|-----------------------|---------------------|-------|------------------------------|---------------------|
| PSV_16.1 PI_16.8 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16039 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | Op tem | |
| | | | | | | | Page 1 |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|----|----|----|------------------------|------|-----|------------|---|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.32 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,24 | | | | | | | | | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,84 | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,46 | | | | | | | | | | |
| 711 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 39,45 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16039 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 39,45 | | | | | | | | |

| | | | | | | | |
|---------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| PSV_16.1 PI_16.8 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16039 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | | Page 2 |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.33 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,13 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 12,21 | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 4,61 | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 2,98 | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 6,63 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 4,40 | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 5,60 | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,68 | | |
| 2218 | 4 | 2 | In | 2,11 | 3,91 | mm | ,00 | 1,00 | NR | 215 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 2220 | 4 | 3 | In | 2,11 | 2,11 | mm | ,00 | 1,00 | NR | 215 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,96 | | |
| 1221 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,62 | | |
| 4539 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,84 | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,00 | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | |

| | | | | | | |
|---------|---------------------------------|--|-------------------------|--|--|--|
| LT_16.4 | Plant SX1 SULPHUREX GH/F | | Piping Class 215 | | Welding specification SP.1406/2-SP.1408/3 | |
| | Line 16040 - 0 | | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | |
| | Area SX1 | | Sketch Sht 1 / 1 | | Isometric code | |
| | Zones | | | | Op tem | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|--|------------------------|-----|-----|------------|-----------|-----------|-------|------------------|-----------|---------|-------|------------|-------------|-----------|--------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.33 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 46,34 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16040 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 46,34 | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| LT_16.4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16040 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | | Page 2 |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.33 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|----|----|------|-----------|----|--------|-------|-----|------------|---|-----------|-------------|--------|--------|--|
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 2,77 | | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 2,98 | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) | 5384 | 6,63 | | | |
| | | | | | | | | | | | Cast ASTM A 351 CF8 S 123 | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged | 5135 | 4,40 | | | |
| | | | | | | | | | | | ASTM A 105 Galvanized | | | | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged | 5138 | 5,60 | | | |
| | | | | | | | | | | | ASTM A 105 Galvanized | | | | | |
| 2218 | 4 | 2 | In | 2,11 | 3,91 | mm | ,00 | 1,00 | NR | 215 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. | | 0,58 | | | |
| | | | | | | | | | | | WP304 | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. | | 0,96 | | | |
| | | | | | | | | | | | WP304 Type A | | | | | |
| 1221 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. | | 0,62 | | | |
| | | | | | | | | | | | WP304 Type A | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 0,92 | | | |
| | | | | | | | | | | | ASTM A 193 B7/A194 2H Galvanized | | | | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 2,00 | | | |
| | | | | | | | | | | | ASTM A 193 B7/A194 2H Galvanized | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 29,87 | | | |
| SX1 | SULPHUREX GH/F | | | | 16041 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 29,87 | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16041 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.33 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 3,30 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 8,43 | | | | | | | | | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 1,60 | | | | | | | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | | | | | | | | | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,28 | | | | | | | | | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,32 | | | | | | | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | | | | | | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | | | | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 14,7 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16042 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 14,7 | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16042 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|-----|---------------------|------|-----------|----|------------------------|-------|-----|------------|--|-----------|-------------|-------------|----------|-----------|---|------------|--|
| PUMA5 | | | 13/04/2010 11.47.33 | | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,70 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 8,65 | | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,30 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 3,32 | | | | | | |
| 2853 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 1,63 | | | | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,80 | | | | | | |
| 224 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 1,22 | | | | | | |
| 1763 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,14 | | | | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,17 | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 17,7 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16043 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 17,7 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16043 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|------------------|--------|-----------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.33 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 18,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 82,94 | | | | | | | | | |
| 339 | 3 | 0 | In | 2,11 | | mm | ,00 | 4,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 3,19 | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 86,13 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 16048 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 86,13 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16048 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.33 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|-------|----|------|-----------|----|--------|-------|-----|------------|---|-----------|-------------|--------|--------|--|
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 10,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 55,48 | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 13,26 | | | |
| 5004 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5133 | 11,22 | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 8,80 | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 5,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 3,39 | | | |
| 1775 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 4,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 1,92 | | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,84 | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,84 | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 4,80 | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 101,99 | | | |
| SX1 | SULPHUREX GH/F | | | | 16049 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 101,99 | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16049 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.34 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|------------------|--|--|-----------------------|--|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|--|-----------------------|--|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 4,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 64,19 | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 11,30 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 296,88 | | |
| 5026 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5223 | 7,00 | | |
| 5028 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5239 | 28,80 | | |
| 3184 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Strainer Y-Type ST.46349/3 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 216 GR. WCB F 71 | 5232 | 162,00 | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 30,00 | | |
| 477 | 10 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 74,00 | | |
| 136 | 10 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 8,75 | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 5,66 | | |
| 304 | 10 | 0 | In | 3,96 | | mm | ,00 | 5,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 79,00 | | |
| 1677 | 10 | 6 | In | 3,96 | 3,96 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,55 | | |
| 5214 | 3/4 | 0 | In | | | mm | 100,00 | 16,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 13,44 | | |
| 5223 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 8,48 | | |
| 5232 | 7/8 | 0 | In | | | mm | 120,00 | 24,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 14,16 | | |
| 5239 | 7/8 | 0 | In | | | mm | 190,00 | 12,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 9,36 | | |
| 669 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |

| | | | | | | |
|---|---------------------------------|--|-------------------------|--|--|---------------|
| TV_16.4 Disk plate - Fe 360B - UNI 7070 -ø 320mm - thk= 10mm = n. 1 pz | Plant SX1 SULPHUREX GH/F | | Piping Class 203 | | Welding specification SP.1406/2-SP.1407/3 | |
| | Line 16101 - 0 | | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area SX1 | | Sketch Sht 1 / 1 | | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|--|-----|--|-------|--|-----------|----------|-----------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.34 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 671 | 10 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 806,29 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16101 - 0 | | | | SX1 | | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 806,29 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| TV_16.4 Disk plate - Fe 360B - UNI 7070 -ø 320mm - thk= 10mm = n. 1 pz | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16101 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | Page 2 |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.34 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|----|-----------|------|------|-----|--------|-------|-----------|------------|--|-----------|-------------|--------|--------|
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 24,07 | | |
| 1458 | 8 | 0 | In | 3,96 | | mm | ,00 | 0,30 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,30 | | |
| 1460 | 10 | 0 | In | 3,96 | | mm | ,00 | 4,90 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 128,74 | | |
| 5028 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5239 | 28,80 | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 15,00 | | |
| 477 | 10 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5232 | 74,00 | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 11,33 | | |
| 1677 | 10 | 6 | In | 3,96 | 3,96 | mm | ,00 | 2,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 9,11 | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | |
| 1124 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,06 | | |
| 4464 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 2,02 | | |
| 5214 | 3/4 | 0 | In | | | mm | 100,00 | 16,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 13,44 | | |
| 5232 | 7/8 | 0 | In | | | mm | 120,00 | 12,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 7,08 | | |
| 5239 | 7/8 | 0 | In | | | mm | 190,00 | 12,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 9,36 | | |
| 669 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| 671 | 10 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 329,86 | | |
| SX1 | SULPHUREX GH/F | | 16102 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 329,86 | | | | |

| | | | |
|--------------------------------|--------------------------|------------------|---|
| PI_16.9 TET_16.4 FI_16.5 | Plant SX1 SULPHUREX GH/F | Piping Class 203 | Welding specification SP.1406/2-SP.1407/3 |
| | Line 16102 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.34 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,40 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 16,13 | | | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 0,30 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 2,61 | | | | | | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 11,20 | | | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,13 | | | | | | | | | | | |
| 1651 | 4 | 3 | In | 3,18 | 3,18 | mm | ,00 | 2,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 1,72 | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 16,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 3,68 | | | | | | | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 39,48 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16103 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 39,48 | | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| FL_16.4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16103 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.34 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 4,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 26,89 | | | | | | | | | | | | | | |
| 5023 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5209 | 7,00 | | | | | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 16,40 | | | | | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | | | | | | | | | | | |
| 1661 | 6 | 3 | In | 3,96 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,18 | | | | | | | | | | | | | | |
| 1677 | 10 | 6 | In | 3,96 | 3,96 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 4,55 | | | | | | | | | | | | | | |
| 5209 | 5/8 | 0 | In | | | mm | 140,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 2,32 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 61,69 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16104 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 61,69 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16104 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.34 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1431 | 1/4 | 0 | In | 2,24 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,63 | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,27 | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | |
| 264 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,09 | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,25 | | | | | | | | | | |
| 1287 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,15 | | | | | | | | | | |
| 4447 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 203 | Coupling Reducing TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,03 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 2,72 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16105 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 2,72 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16105 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|-----------|--------|------------------------|----|------------|--|-----------|-------------|-------------|-----------|-----------|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.34 | | | | | | | | | DOC: | 1E35-65-029 | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 3,21 | | | | | |
| 1458 | 8 | 0 | In | 3,96 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 21,01 | | | | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 7,50 | | | | | |
| 1670 | 8 | 6 | In | 3,96 | 3,96 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 3,17 | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | |
| 5214 | 3/4 | 0 | In | | | mm | 100,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 6,72 | | | | | |
| 669 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 42,16 | | | | |
| SX1 | SULPHUREX GH/F | | | | | 16106 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 42,16 | | |

TET_16.5

Plant SX1 SULPHUREX GH/F
Line 16106 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 203
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/3
System
De pres
Isometric code

Op tem

Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|--------|--|--|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.35 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,10 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 16,05 | | | | | | | | | | | | | | |
| 5026 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5223 | 7,00 | | | | | | | | | | | | | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 22,50 | | | | | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | | | | |
| 5214 | 3/4 | 0 | In | | | mm | 100,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 6,72 | | | | | | | | | | | | | | |
| 5223 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 8,48 | | | | | | | | | | | | | | |
| 669 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 61,3 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16107 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 61,3 | | | | | | | | | | | | |

| | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| TET_16.6 | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16107 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|------|----|------------------------|-------|----|------------|--|-----------|-------------|----------|-----------|-------------|--------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.35 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,40 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,50 | | | | | | | | | | |
| 1463 | 14 | 0 | In | 6,35 | | mm | ,00 | 11,40 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 623,46 | | | | | | | | | | |
| 307 | 14 | 0 | In | 6,35 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 90,68 | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 3,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,41 | | | | | | | | | | |
| 2116 | 14 | 10 | In | 6,35 | 3,96 | mm | ,00 | 1,00 | NR | 203 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 17,97 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 736,02 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16108 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 736,02 | | | | | | |

| | | | | | | | |
|---|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| Disk plate - Fe 360B-UNI 7070- ø 400mm - thk 10mm = n. 1 pz | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16108 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|---|-----------|------------------|--------|-----------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.35 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1462 | 12 | 0 | In | 4,78 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 37,60 | | | | | | | | | |
| 306 | 12 | 0 | In | 4,78 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 27,10 | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 64,71 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 16109 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 64,71 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16109 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.35 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 16,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 40,04 | | | | | | | | | | | |
| 2986 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Check ST.46275/1 SW-F 800# Forged ASTM A 105 R 83 | | 4,80 | | | | | | | | | | | |
| 3109 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,30 | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 8,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,08 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 49,22 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16110 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 49,22 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 16110 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----|--|----------|--|-------------|-----------|-------------|--|-----------|--------|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.35 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1463 | 14 | 0 | In | 6,35 | | mm | ,00 | 7,30 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | | | | | | 399,23 | | | | | |
| 139 | 14 | 0 | In | 6,35 | | mm | ,00 | 3,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | | | | | | 68,01 | | | | | |
| 307 | 14 | 0 | In | 6,35 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | | | | | | 45,34 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 512,58 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16111 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 512,58 | | | |

| | | | | | | | |
|---|------------------|-------|----------------|--------------|-------|-----------------------|---------------------|
| Disk plate - Fe 360B - UNI 7070 - ø 400mm- thk 10mm = n. 1 pz Funnel ST 46250 - Fe 42B - 14" = n. 1 pz | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16111 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|-----|----|---------------------|------|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.35 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1434 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 5,60 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 9,44 | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,50 | | | | | | | | | | | |
| 2830 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,60 | | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | | | | | | |
| 1750 | 1 | 3/4 | In | 3,38 | 2,87 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 11,92 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16120 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 11,92 | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16120 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|-----|----|---------------------|------|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|--------|--|-----------|----------|-------|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.35 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1434 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 4,20 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,08 | | | | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,50 | | | | | | | | | | | | | | |
| 3118 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 1,70 | | | | | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | | | | | | | | | |
| 1750 | 1 | 3/4 | In | 3,38 | 2,87 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 10,66 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16121 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 10,66 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16121 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----|-------|----------|-------------|-----------|-----------|-------------|--------|--------|--|
| PUMA5 | | | 13/04/2010 11.47.35 | | | | | | | | | | | DOC: | 1E35-65-029 | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| 1495 | 1 | 0 | In | 3,38 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | | 15,01 | | | |
| 6025 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46396/3 THRD-F NPT 150 LB Forged BRONZE R 96 | | | | | | | 0,81 | | | |
| 392 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Flange ASME B16.5 THRD-F NPT 150 LB RF (125÷250 AARH) Forged ASTM A 105 Galvanized | | | | | | 5126 | 0,90 | | | |
| 254 | 1 | 0 | In | | | mm | ,00 | 6,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | 6,60 | | | |
| 1277 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | 1,30 | | | |
| 4569 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | 0,25 | | | |
| 5126 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 202 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | | 0,44 | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 25,31 | | | |
| SX1 | SULPHUREX GH/F | | | | | 16122 - 0 | | | | | SX1 | SX1 | 1 / 1 | | | | | TOTAL Kg: | | 25,31 | |

| | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| HV_16.18 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 16122 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.36 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|-----|----|----|------|----|----|--------|------|----|------------|--|-----------|-------------|--------|--------|--|
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | 7,59 | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,65 | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | |
| 4999 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5125 | 3,06 | | | |
| 390 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 202 | Flange ASME B16.5 THRD-F NPT 150 LB RF (125÷250 AARH) Forged ASTM A 105 Galvanized | 5125 | 0,80 | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,40 | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 8,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 3,20 | | | |
| 4673 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | 0,28 | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,08 | | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 202 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 6,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,72 | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 17,97 | | |

| | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| KV_16.17 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 16123 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.36 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 32,39 | | | | | | | | | | | |
| 2832 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 4,50 | | | | | | | | | | | |
| 3120 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 3,45 | | | | | | | | | | | |
| 3178 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Strainer Y-Type ST.46326/4 THRD-F NPT 200 LB Forged BRONZE F 70 | | 2,20 | | | | | | | | | | | |
| 469 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5193 | 4,20 | | | | | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 5,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,84 | | | | | | | | | | | |
| 4656 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 1,28 | | | | | | | | | | | |
| 5193 | 1/2 | 0 | In | | | mm | 75,00 | 12,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,44 | | | | | | | | | | | |
| 663 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 51,3 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 16125 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 51,3 | | | | | | | |

| | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| TCV_16.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16125 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|-----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.36 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 0,40 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,62 | | | | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 6,90 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 37,52 | | | | | | | | | | | |
| 469 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5193 | 1,40 | | | | | | | | | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 5,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 3,32 | | | | | | | | | | | |
| 1758 | 2 | 3/4 | In | 3,91 | 2,87 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,43 | | | | | | | | | | | |
| 5193 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,48 | | | | | | | | | | | |
| 663 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 44,77 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16127 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 44,77 | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16127 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.36 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1434 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 4,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 6,75 | | | | | | | | | | | | | | |
| 3117 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,80 | | | | | | | | | | | | | | |
| 466 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,70 | | | | | | | | | | | | | | |
| 323 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 3,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,26 | | | | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | | | | |
| 660 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 8,94 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16129 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 8,94 | | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16129 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.36 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1434 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 3,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,06 | | | | | | | | | | | |
| 6023 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46396/3 THRD-F NPT 150 LB Forged BRONZE R 96 | | 0,46 | | | | | | | | | | | |
| 466 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,70 | | | | | | | | | | | |
| 155 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 2,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,06 | | | | | | | | | | | |
| 323 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,17 | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | |
| 660 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 6,89 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 16130 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 6,89 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16130 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|-------|----|---------------------|------|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.36 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 4,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 16,20 | | | | | | | | | | | |
| 3120 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 3,45 | | | | | | | | | | | |
| 470 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5199 | 2,20 | | | | | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 4,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,47 | | | | | | | | | | | |
| 1761 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,43 | | | | | | | | | | | |
| 1258 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 1,26 | | | | | | | | | | | |
| 5199 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,84 | | | | | | | | | | | |
| 664 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 25,85 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16131 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 25,85 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16131 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|----|------------------------|-------|----|------------|---|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.36 | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 10,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 40,49 | | | | | | | | | | |
| 6028 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46396/3 THRD-F NPT 150 LB Forged BRONZE R 96 | | 1,50 | | | | | | | | | | |
| 469 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5193 | 1,40 | | | | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 10,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 3,68 | | | | | | | | | | |
| 1258 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 1,26 | | | | | | | | | | |
| 5193 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7//ASTM A 194 GR.2H | | 0,48 | | | | | | | | | | |
| 663 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 48,81 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16132 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 48,81 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16132 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|------------------------|------|-----|------------|--|---------------------|-------------|------------------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.47.37 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1431 | 1/4 | 0 | In | 2,24 | | mm | ,00 | 9,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,70 | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,40 | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 9,38 | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16136 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,38 | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 16136 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.37 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 9,70 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 39,28 | | | | | | | | | | | | | | |
| 469 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5193 | 1,40 | | | | | | | | | | | | | | |
| 158 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,37 | | | | | | | | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 3,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,10 | | | | | | | | | | | | | | |
| 5193 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,48 | | | | | | | | | | | | | | |
| 663 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 42,63 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16137 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 42,63 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16137 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.37 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,60 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,50 | | | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 2,88 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16138 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 2,88 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 16138 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|------------------------|------|-----|------------|--|-----------|-------------|----------|-----------|-------------|-----|----------|--|-----------|------------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
| PUMA5 | | | 13/04/2010 11.47.37 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,70 | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,50 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 7,9 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 16139 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 7,9 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 16139 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|------------------------|------|----|------------|--|-----------|-------------|--------|-------------|--|----------|--|-----------|------------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
| PUMA5 | | | 13/04/2010 11.47.37 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,60 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,82 | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 8,88 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 25101 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 8,88 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25101 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|------|----|------------------------|-------|-----|------------|--|-----------|-------------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.37 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 14,70 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 36,78 | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 3,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,41 | | | | |
| 1756 | 1+1/2 | 1 | In | 3,68 | 3,38 | mm | ,00 | 1,00 | NR | 205 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,26 | | | | |
| 4654 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,57 | | | | |
| 4548 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,25 | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 38,27 | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25102 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 38,27 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25102 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|----|-----------|------------------------|------|----|------------|--|-----------|-------------|-------------|-----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.37 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 2,53 | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 5,47 | | | |
| SX1 | SULPHUREX GH/F | | | | | 25103 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 5,47 |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25103 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|-----------|------------------------|------|----|------------|--|-----------|-------------|-----------|-------------|----------|-----------|---|------------|--|
| PUMA5 | | | 13/04/2010 11.47.37 | | | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,59 | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,56 | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 18,94 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 25104 - 0 | | | | | SX1 SX1 | 1 / 1 | | TOTAL Kg: | 18,94 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25104 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.38 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,50 | | | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 14,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 56,69 | | | | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 8,16 | | | | | | | | | | | |
| 3111 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 7,00 | | | | | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 8,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 2,94 | | | | | | | | | | | |
| 4656 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 1,28 | | | | | | | | | | | |
| 1056 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | |
| 4458 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,63 | | | | | | | | | | | |
| 4550 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 2,25 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 80,12 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 25105 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 80,12 | | | | | | | | | |

| | | | | | | | | |
|---------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| PI_24.2 TET_24.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 | |
| | Line | 25105 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.38 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,13 | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 3,20 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 8,01 | | | | | | | | | | |
| 3109 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,30 | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,27 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 13,06 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25106 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 13,06 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25106 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|------------------------|------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.38 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 3,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 4,43 | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,75 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 7, | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25107 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 7, | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25107 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.38 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,20 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,52 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | | |
| 3186 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Strainer Y-Type ST.46276/1 SW-F 800# Forged ASTM A 105 F 69 | | 0,50 | | | | | | | | | | | |
| 919 | 1/2 | 3/8 | In | | | mm | ,00 | 1,00 | NR | 205 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 3,78 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 25108 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 3,78 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25108 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.38 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,80 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,01 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 2,71 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 25109 - 0 | | | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 2,71 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25109 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.38 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 3,70 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 4,68 | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,75 | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 8,37 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25110 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 8,37 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25110 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|-------------|----------|-----------|---|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.38 | | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,70 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,95 | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,40 | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,50 | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,24 | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 12,21 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25111 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 12,21 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25111 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.38 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 3,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 4,43 | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | |
| 3186 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Strainer Y-Type ST.46276/1 SW-F 800# Forged ASTM A 105 F 69 | | 0,50 | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,75 | | | | | | | | | | |
| 919 | 1/2 | 3/8 | In | | | mm | ,00 | 1,00 | NR | 205 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 7,56 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25112 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 7,56 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25112 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.39 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 3,40 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 4,30 | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,70 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,76 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 3,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,41 | | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | | | | | | | | | |
| 4455 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,10 | | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,24 | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7//ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 19,63 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25113 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 19,63 | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25113 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|------------------------|------|----|------------|--|-----|-------|------------------|--|---------|-----------|-------------|-----|-----------|--------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.39 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,20 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | 1,52 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | | | | | | 1,70 | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | 0,28 | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 3,5 | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25114 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 3,5 | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25114 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.39 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,80 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,01 | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,50 | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 4,05 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25115 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 4,05 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25115 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|-------------|-----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.39 | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,70 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,95 | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,50 | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 8,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,88 | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 11,23 | | | |
| SX1 | SULPHUREX GH/F | | | | | 25116 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 11,23 |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25116 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.39 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 8,23 | | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,50 | | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | | | | | | | |
| 1749 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 205 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,56 | | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7//ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 20,6 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 25119 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 20,6 | | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25119 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|---------------------|------------------------|----|------|----------------|-----------|--------|------|----|------------|--|-----------|-------------|-----------|--------|------------|
| PUMA5 | 13/04/2010 11.47.39 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 5,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 6,33 | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,56 | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 18,07 | | |
| SX1 | SULPHUREX GH/F | | | | | 25120 - 0 | | | | | SX1 SX1 | 1 / 1 | | TOTAL Kg: | | 18,07 |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25120 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.39 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 8,23 | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,84 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 13,91 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 25123 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 13,91 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25123 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|----|-----------|------------------------|------|----|------------|--|-----------|-------------|----------|-------------|----------|-------|------------|
| PUMA5 | | | 13/04/2010 11.47.40 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,70 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,01 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,12 | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 22,91 | | | | |
| SX1 | SULPHUREX GH/F | | | | | 25124 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 22,91 | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25124 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.40 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,59 | | | | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,84 | | | | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 19,34 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25125 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 19,34 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25125 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|--------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.40 | | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,59 | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,84 | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 19,34 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25126 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 19,34 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25126 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|-----------|----------|-------|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.40 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,60 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 8,35 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,00 | | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,84 | | | | | | | | | | | |
| 919 | 1/2 | 3/8 | In | | | mm | ,00 | 1,00 | NR | 205 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 20,32 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25127 - 0 | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 20,32 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25127 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|-----------|----------|-------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.40 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 5,90 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,47 | | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,00 | | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,84 | | | | | | | | | | | |
| 919 | 1/2 | 3/8 | In | | | mm | ,00 | 1,00 | NR | 205 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 19,43 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25128 - 0 | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 19,43 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25128 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|----------|-----------|-------------|-----|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.40 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,60 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,82 | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | |
| 3174 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Strainer Y-Type ST.46326/4 THRD-F NPT 200 LB Forged BRONZE F 70 | | 0,50 | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,00 | | | | | | | | | | |
| 919 | 1/2 | 3/8 | In | | | mm | ,00 | 1,00 | NR | 203 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 8,2 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25129 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 8,2 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 25129 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|---------------------|------|----|-----------|--------|------------------------|----|------------|---|-----------|------------------|--------|-----------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.40 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,80 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,54 | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,75 | | | | | | | | | |
| 919 | 1/2 | 3/8 | In | | | mm | ,00 | 1,00 | NR | 203 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 4,35 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 25130 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 4,35 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 25130 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|-----|---------------------|------|------|----|------------------------|-------|----|------------|---|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.40 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 12,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 15,19 | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | |
| 3174 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Strainer Y-Type ST.46326/4 THRD-F NPT 200 LB Forged BRONZE F 70 | | 0,50 | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 5,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,25 | | | | | | | | | | |
| 1749 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | | |
| 919 | 1/2 | 3/8 | In | | | mm | ,00 | 1,00 | NR | 203 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 17,95 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25131 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 17,95 | | | | | | |

| | | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 | |
| | Line | 25131 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|---------------------|------|----|-----------|--------|------------------------|----|------------|---|-----------|------------------|--------|---------|--|------------|-----------|-----------|------|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.41 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,80 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,54 | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,75 | | | | | | | | | |
| 919 | 1/2 | 3/8 | In | | | mm | ,00 | 1,00 | NR | 203 | Reducing Insert M/F TA 50.7/2 THRD-M NPT x THRD-F 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 4,35 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 25132 - 0 | | | | | SX1 | SX1 | 1 / 1 | | | | | TOTAL Kg: | | 4,35 | | |

| | | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 | |
| | Line | 25132 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|-------------|----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.41 | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,27 | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 4,49 | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25133 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 4,49 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25133 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.41 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|----|----|------|-----------|----|--------|------|-----|------------|---|-----------|-------------|--------|--------|--|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,25 | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 5,80 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 14,51 | | | |
| 3109 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,30 | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,54 | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,24 | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7//ASTM A 194 GR.2H | | 0,44 | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 20,09 | | |
| SX1 | SULPHUREX GH/F | | | | 25134 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 20,09 | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25134 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|------------------------|------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.41 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,60 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 2,03 | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 5,37 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25135 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 5,37 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25135 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|--|-----|--|-------|----------|--|-------------|-------------|-----------|--------|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.41 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 7,60 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | 9,62 | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | | | | | | 5,10 | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | | | | | | 4,08 | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | | | 5191 | 0,40 | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | 1,00 | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | 0,84 | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | 0,76 | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | | | | | | 0,12 | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | | 0,44 | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 22,36 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 25136 - 0 | | | | | SX1 | SX1 | | 1 / 1 | | | | | TOTAL Kg: | | 22,36 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25136 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|---------------------|------------------------|----|------|----------------|-----------|--------|------|----|------------|--|-----------|-------------|----------|--------|------------|
| PUMA5 | 13/04/2010 11.47.41 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,80 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 6,08 | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 3,40 | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,50 | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,24 | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 12,34 | | | |
| SX1 | SULPHUREX GH/F | | | | | 25137 - 0 | | | | | SX1 SX1 | 1 / 1 | TOTAL Kg: | 12,34 | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25137 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.42 | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 5,90 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,47 | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,00 | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,84 | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 19,37 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 25138 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 19,37 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25138 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|-----------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.42 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,10 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,13 | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,70 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,76 | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 3,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 12,15 | | | | | | |
| 3111 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 7,00 | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,27 | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 3,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,10 | | | | | | |
| 1756 | 1+1/2 | 1 | In | 3,68 | 3,38 | mm | ,00 | 1,00 | NR | 205 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,26 | | | | | | |
| 4455 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 205 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 0,10 | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 32,89 | | | | |
| SX1 | SULPHUREX GH/F | | | | 25140 - 0 | | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 32,89 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25140 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|-----|----|---------------------|------|----|-----------|------------------------|-----|------------|---|-----------|-------------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.42 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 9,50 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 12,02 | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,50 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | |
| 1749 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 2,00 | NR | 205 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,27 | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,84 | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 23,7 | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25142 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 23,7 | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25142 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.42 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,70 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,95 | | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,00 | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,89 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25143 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,89 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25143 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.42 | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 5,90 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,47 | | | | | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,00 | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,84 | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 19,37 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 25144 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 19,37 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25144 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|-------|--|--|-----------|-----------|-------------|-------|----------|-----------|-------------|--|------------|--------|--|
| PUMA5 | | | | 13/04/2010 11.47.42 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 7,60 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | | | | 9,62 | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | | | | | | | | | | 5,10 | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | | | | | | | | | | 4,08 | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | | | | | | | 5191 | 0,40 | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | | | | | 1,00 | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | | | | | 0,84 | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 207 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | | | | | 0,76 | | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | | | | | | | | | | 0,12 | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 2,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | | | | | | 0,22 | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 22,14 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25145 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 22,14 | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25145 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|----|----|--------|------------------------|----|------------|--|-----|-------|--|----------|-------------|-----------|-------------|----------|------------|
| PUMA5 | | | 13/04/2010 11.47.43 | | | | | | | | | | | | DOC: | 1E35-65-029 | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,90 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | 8,73 | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | | | | | | 5,10 | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | | | | | | 4,08 | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | | | 5191 | 0,40 | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | 0,84 | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | 0,76 | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | | | | | | 0,12 | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | | 0,44 | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 20,48 | |
| SX1 | SULPHUREX GH/F | | | | | | | 25146 - 0 | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 20,48 | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25146 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|--|-------|--|--|-----------|-----------|-------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.43 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,90 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | | | | 8,73 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | | | | | | | | | | 5,10 | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | | | | | | | | | | 4,08 | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | | | | | | | 5191 | 0,40 | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | | | | | 0,84 | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | | | | | 0,76 | | | | | |
| 4581 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | | | | | 0,12 | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | | | | | | 0,44 | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 20,48 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25147 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 20,48 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25147 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|----|-----------|------------------------|------|----|------------|--|-----------|-------------|-------------|-----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.43 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 2,53 | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 1,70 | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 5,07 | | | |
| SX1 | SULPHUREX GH/F | | | | | 25148 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 5,07 | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25148 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|--|--|--|-------|-----------|----------|------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.43 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 7,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | | | | 8,86 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | | | | | | | | | | 5,10 | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | | | | | | | | | | 4,08 | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | | | | | | | 5191 | 0,40 | | | | | |
| 266 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 207 | 90° Elbow TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | | | | | 1,00 | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | | | | | 0,56 | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | | | | | | | | | | 0,76 | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | | | | | | 0,44 | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 21,2 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 25150 - 0 | | | | SX1 | SX1 | | | | 1 / 1 | | | | TOTAL Kg: | | 21,2 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25150 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|----|-----------|------------------------|------|----|------------|--|-----------|-------------|----------|-------------|----------|-------|------------|
| PUMA5 | | | 13/04/2010 11.47.43 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,70 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,01 | | | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 5,10 | | | | | |
| 4949 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Steam Trap ST.46702/0 THRD-F NPT PN 25 Forged AISI 304 T 71 | | 4,08 | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,12 | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 22,91 | | | | |
| SX1 | SULPHUREX GH/F | | | | | 25153 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 22,91 | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 25153 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.43 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|----|----|------|-----------|----|--------|-------|-----|------------|---|-----------|-------------|--------|--------|
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 0,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 2,72 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 16,64 | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) | 5384 | 6,63 | | |
| | | | | | | | | | | | Cast ASTM A 351 CF8 S 123 | | | | |
| 3194 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Strainer Y-Type ST.46350/5 FLG 150 LB RF (125÷250 AARH) Cast | 5133 | 14,28 | | |
| | | | | | | | | | | | ASTM A 351 GR. CF8M F 72 | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged | 5135 | 13,20 | | |
| | | | | | | | | | | | ASTM A 105 Galvanized | | | | |
| 470 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged | 5199 | 2,20 | | |
| | | | | | | | | | | | ASTM A 105 | | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 | | 0,68 | | |
| | | | | | | | | | | | GR. WP304 | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 6,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. | | 2,87 | | |
| | | | | | | | | | | | WP304 Type A | | | | |
| 5199 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 0,84 | | |
| | | | | | | | | | | | ASTM A 193 B7/ASTM A 194 GR.2H | | | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 0,84 | | |
| | | | | | | | | | | | ASTM A 193 B7/A194 2H Galvanized | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 16,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 3,68 | | |
| | | | | | | | | | | | ASTM A 193 B7/A194 2H Galvanized | | | | |
| 664 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 7,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | |
| M Erection | | | | | | | | | | | | Total Kg: | 66,99 | | |
| SX1 | SULPHUREX GH/F | | | | 33001 - 0 | | | | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 66,99 | | |

| | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| LCV_33.2 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33001 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.43 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|------------------|--|--|--|-----------------------|--|--|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|--|--|-----------------------|--|--|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,65 | | |
| 1526 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 3,76 | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 5,96 | | |
| 6032 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5385 | 21,43 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 452 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5136 | 3,60 | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 5,60 | | |
| 338 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,54 | | |
| 340 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 2,80 | | |
| 5801 | 4 | 1+1/2 | In | 2,11 | 3,68 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 1219 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,32 | | |
| 1221 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,62 | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,00 | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 5,12 | | |

| | | | | |
|--|-------------------------|-----------------------|-------------------------|--|
| | Plant SX1 | SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 33002 - 0 | | Fluid | System |
| | Dang. fluid type | | Coating | De pres |
| | Area SX1 | | Sketch Sht 1 / 1 | Op tem |
| | Zones | | | Isometric code |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|--|------------------------|-----|-----|------------|-----------|-----------|-------|------------------|-----------|---------|-------|------------|-------------|-----------|--------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.44 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 54,61 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33002 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 54,61 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33002 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.44 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 11,10 | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 13,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 59,90 | | |
| 6030 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5385 | 14,28 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 4,40 | | |
| 452 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5136 | 3,60 | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 8,20 | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 1,36 | | |
| 339 | 3 | 0 | In | 2,11 | | mm | ,00 | 6,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 4,78 | | |
| 1792 | 3 | 2+1/2 | In | 2,11 | 2,11 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,39 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,96 | | |
| 1219 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,32 | | |
| 1220 | 3 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,80 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,46 | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | |

| | | | | | | |
|-----------|-------------------------|--------------------|---------------------|-------|------------------------------|---------------------|
| PSV_33.11 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33003 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | Op tem | |
| | | | | | Page | 1 |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|----|----|----|------------------------|-------|-----|------------|---|-----------|-------------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.44 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 5140 | 5/8 | 0 | In | | | mm | 125,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,08 | | | | |
| 5141 | 5/8 | 0 | In | | | mm | 130,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,56 | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,56 | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 116,63 | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33003 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 116,63 | | | |

| | | | | | | |
|-----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PSV_33.11 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33003 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.44 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 6,20 | | | | | | | | | | | | | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 1,40 | | | | | | | | | | | | | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,75 | | | | | | | | | | | | | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,29 | | | | | | | | | | | | | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | | | | | | | | | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 9,11 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33005 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 9,11 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33005 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.44 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|------------------|--|--|--|-----------------------|--|--|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|--|--|-----------------------|--|--|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 8,26 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 8,32 | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 6,63 | | |
| 6034 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 5,31 | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 4,20 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 4,40 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 3,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 1,13 | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 1,36 | | |
| 1775 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,86 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,96 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,44 | | |
| 5132 | 1/2 | 0 | In | | | mm | 115,00 | 6,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,90 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 5,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |

| | | | |
|-----------|---------------------------------|-------------------------|--|
| PSV_33.12 | Plant SX1 SULPHUREX GH/F | Piping Class 215 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 33006 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Isometric code |
| | Zones | | Op tem |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|-----------|------------------------|-------|----|------------|---|-----|--|----------|--|-------------|-----------|-------------|--|-----------|--------|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.47.44 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | | | | | | 2,40 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 47,52 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33006 - 0 | | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 47,52 | | | |

| | | | | | | |
|-----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PSV_33.12 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33006 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.44 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|-----|----|------|-----------|----|--------|-------|-----|------------|---|-----------|-------------|--------|--------|--|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 25,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 65,10 | | | |
| 2855 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 2,86 | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,40 | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 2,40 | | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 9,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 1,24 | | | |
| 1763 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,14 | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,08 | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,49 | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 75,69 | | | |
| SX1 | SULPHUREX GH/F | | | | 33008 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 75,69 | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33008 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|--------|--|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.45 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 8,32 | | | | | | | | | | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | | | | | | | | | | | | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,68 | | | | | | | | | | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | | | | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | | | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 12,6 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33009 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 12,6 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33009 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.45 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 13,50 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 33,78 | | | | | | | | | | | |
| 2840 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 212 | Valve Ball Full Port ST.46590/3 LUG 150 LB RF (125÷250 AARH) | 5373 | 2,80 | | | | | | | | | | | |
| | | | | | | | | | | | Forged ASTM A 105 S 127 | | | | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 5,00 | NR | 212 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged | 5192 | 4,00 | | | | | | | | | | | |
| | | | | | | | | | | | ASTM A 105 | | | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 6,00 | NR | 212 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,81 | | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 14,00 | NR | 212 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 1,54 | | | | | | | | | | | |
| | | | | | | | | | | | ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | | | | | | | | |
| 693 | 1 | 0 | In | | | mm | ,00 | 5,00 | NR | 212 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5B | | | | | | | | | | | | | |
| 5373 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 212 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 | | 1,28 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 44,21 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33010 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 44,21 | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33010 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|---------------------|------|------|-----------|--------|------------------------|----|------------|--|-----------|------------------|--------|-----------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.45 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 16,00 | m | 212 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 20,25 | | | | | | | | | |
| 231 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 212 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,80 | | | | | | | | | |
| 2174 | 1 | 1/2 | In | 3,38 | 2,77 | mm | ,00 | 1,00 | NR | 212 | Reducer Eccentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 21,19 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33011 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 21,19 | | | | | |

| | | | | | | | |
|--|------------------|-------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 212 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33011 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.45 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 5,11 | | | | | | | | | | | |
| 2855 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 5,71 | | | | | | | | | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 4,80 | | | | | | | | | | | |
| 161 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,07 | | | | | | | | | | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,28 | | | | | | | | | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 6,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,97 | | | | | | | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 14,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,68 | | | | | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 32,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,56 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 21,18 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33012 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 21,18 | | | | | | | |

| | | | | | | | |
|----------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| LCV_33.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33012 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.45 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|------|----|------------|--|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,65 | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 4,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 24,97 | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 6,63 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 1,40 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | |
| 164 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,64 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,38 | | |
| 332 | 2 | 0 | In | 3,91 | | mm | ,00 | 4,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 2,71 | | |
| 1775 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,29 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33013 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|--|-------|--|----------|--|-------------|-------------|----------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.45 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | | | | | | 2,40 | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 45,29 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33013 - 0 | | SX1 | | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 45,29 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33013 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.45 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-----|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,28 | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 14,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 59,91 | | |
| 2864 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 1,43 | | |
| 2866 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 3,27 | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,80 | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 4,20 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 7,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 2,63 | | |
| 1768 | 1+1/2 | 1/2 | In | 3,68 | 2,77 | mm | ,00 | 2,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,53 | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,17 | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,86 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 6,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,72 | | |
| 5130 | 1/2 | 0 | In | | | mm | 105,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,56 | | |
| 5132 | 1/2 | 0 | In | | | mm | 115,00 | 6,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,90 | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |

PSV_33.13
FE_33.1
QUICK ADPTOR 1" - TYPE 8 AISI 304 = N. 1 pz

Plant SX1 SULPHUREX GH/F
Line 33014 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 215
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1408/3
System
De pres
Isometric code

Op tem

Page 1

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|--|------------------------|-----|-----|------------|-----------|-----------|-------|------------------|-----------|---------|-------|------------|-------------|-----------|--------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.46 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 77,72 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33014 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 77,72 | | | | | | |

| | | | | | | | | |
|---|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| PSV_33.13 FE_33.1 QUICK ADPTOR 1" - TYPE 8 AISI 304 = N. 1 pz | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line | 33014 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 2 | |
| | Zones | | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 | | | | | |
|------------|----------------|----|---------------------|------|-----------|----|------------------------|-------|-----|------------|--|-----------|-------------|--------|-------------|-------|----|------------|----|-------|-----|-------|----|
| PUMA5 | | | 13/04/2010 11.47.46 | | | | | | | | | | | DOC: | 1E35-65-029 | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: | In | Thk: | mm | Temp: | °C | Pres: | BAR | Corr: | mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 7,75 | | | | | | | | | | |
| 2853 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 1,63 | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | | | | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,80 | | | | | | | | | | |
| 4684 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F304 | | 0,29 | | | | | | | | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,17 | | | | | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | | | | | | | | | |
| 5130 | 1/2 | 0 | In | | | mm | 105,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,56 | | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 14,15 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33016 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | 14,15 | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33016 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.46 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 16,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 20,66 | | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | | | | | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 1,20 | | | | | | | | | | | |
| 4684 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F304 | | 0,57 | | | | | | | | | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,25 | | | | | | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 6,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,72 | | | | | | | | | | | |
| 5130 | 1/2 | 0 | In | | | mm | 105,00 | 6,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,84 | | | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 24,96 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33017 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 24,96 | | | | | | | | | |

| | | | | | | | |
|-----------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| PSV_33.14 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33017 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|--------|--|--|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.46 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 4,13 | | | | | | | | | | | | | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 1,40 | | | | | | | | | | | | | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,38 | | | | | | | | | | | | | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,29 | | | | | | | | | | | | | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | | | | | | | | | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 6,67 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33019 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 6,67 | | | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33019 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|--------|--|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.46 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1540 | 3 | 0 | In | 2,11 | | mm | ,00 | 11,00 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 50,69 | | | | | | | | | | | | | | |
| 6031 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5385 | 28,57 | | | | | | | | | | | | | | |
| 184 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 216 | 45° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 0,41 | | | | | | | | | | | | | | |
| 352 | 3 | 0 | In | 2,11 | | mm | ,00 | 3,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 2,39 | | | | | | | | | | | | | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,92 | | | | | | | | | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 4,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 32,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 5,12 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 89,1 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33020 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 89,1 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| FLANGIA S.O. ASME B 16.5 FOR JACKET 150#RF - ASTM A403 GR.WP316 Tp. A - DN 3" = N. 2 pz | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33020 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|------------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.46 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,27 | | | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 12,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 104,57 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 105,83 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33020J - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 105,83 | | | | | | | |

| | | | | | | | |
|--|------------------|--------|----------------|--------------|-------|-----------------------|---------------------|
| REDUCER CONCENTRIC FOR JACKET - API 5L Gr. B - Size 4"x108 = N. 2 pz. DISK PLATE ø 125x91 sp. 5 = N. 2 pz. SPACERS 8x5x50 = N. 12 pz. | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33020J | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.46 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1522 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 2,55 | | | | | | | | | | | | | | |
| 1540 | 3 | 0 | In | 2,11 | | mm | ,00 | 7,00 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 32,25 | | | | | | | | | | | | | | |
| 184 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 216 | 45° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 0,41 | | | | | | | | | | | | | | |
| 352 | 3 | 0 | In | 2,11 | | mm | ,00 | 3,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 2,39 | | | | | | | | | | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | | | | | | | | | | | | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 12,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,88 | | | | | | | | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 41,45 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33021 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 41,45 | | | | | | | | | | |

REDUCER CONCENTRIC ASME B16.9 BE WROUGHT W ASTM A 403 Gr. WP 316 - SIZE 3"x1" = 2 pz.
FLANGIA S.O. ASME B 16.5 FOR JACKET 150#RF - ASTM A403 GR.WP316 Tp. A - DN 3" = N. 5 pz
FLANGIA S.O. ASME B 16.5 FOR JACKET 150#RF - ASTM A403 GR.WP316 Tp. A - DN 1" = N. 4 pz

Plant SX1 SULPHUREX GH/F
Line 33021 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 216
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1408/3
System
De pres
Isometric code

Op tem
Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|-----|---------------------|------|------|------------|--------|------------------------|----|------------|--|-----------|-------------|-------------|-----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.46 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,16 | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 69,71 | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 1,60 | | | | |
| 1649 | 4 | 2 | In | 3,18 | 3,91 | mm | ,00 | 2,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 1,72 | | | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 2,00 | NR | 203 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,06 | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,88 | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 77,13 | | | |
| SX1 | SULPHUREX GH/F | | | | | 33021J - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 77,13 | |

REDUCER CONCENTRIC FOR JACKET - API 5L Gr. B - Size 4"x108 = N. 5 pz.
REDUCER CONCENTRIC FOR JACKET - API 5L Gr. B - Size 2"x49 = N. 2 pz.
SPACERS 8x5x50 = N. 15 pz.

Plant SX1 SULPHUREX GH/F
Line 33021J - 0
Dang. fluid type
Area SX1
Zones

Piping Class 203
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/3
System
De pres
Isometric code

Op tem
Page 1

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 | | |
|------------|----------------|----|---------------------|------|-----------|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|-----------|------------|--|--|
| PUMA5 | | | 13/04/2010 11.47.47 | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1520 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 0,65 | | | | | |
| 1522 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 2,55 | | | | | |
| 1525 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 8,32 | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | |
| 2872 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5384 | 6,63 | | | | | |
| 334 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP316 | | 0,14 | | | | | |
| 337 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP316 | | 0,68 | | | | | |
| 1787 | 2 | 1 | In | 3,91 | 3,38 | mm | ,00 | 1,00 | NR | 216 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP316 | | 0,44 | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 23,92 | | | | |
| SX1 | SULPHUREX GH/F | | | | 33022 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | 23,92 | | |

FLANGIA S.O. ASME B 16.5 FOR JACKET 150#RF - ASTM A403 GR.WP316 Tp. A - DN 2" = N. 1 pz
 FLANGIA S.O. ASME B 16.5 FOR JACKET 150#RF - ASTM A403 GR.WP316 Tp. A - DN 1" = N. 1 pz

Plant SX1 SULPHUREX GH/F
 Line 33022 - 0
 Dang. fluid type
 Area SX1
 Zones

Piping Class 216
 Fluid
 Coating
 Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1408/3
 System
 De pres
 Isometric code

Op tem

Page 1

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|------------------------|------|----|------------|--|-----------|-------------|----------|-----------|-------------|-------|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.47 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,63 | | | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 5,44 | | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 13,44 | | | | | | | | | | |
| 1646 | 3 | 2 | In | 3,18 | 3,91 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,57 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 20,09 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33022J - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 20,09 | | | | | | |

REDUCER CONCENTRIC FOR JACKET - API 5L Gr. B -
SIZE 3"x78 = N. 1
REDUCER CONCENTRIC FOR JACKET - API 5L Gr. B -
SIZE 2"x49 = N. 1
SPACERS 10x5x50 = 6 pz.

Plant SX1 SULPHUREX GH/F
Line 33022J - 0
Dang. fluid type
Area SX1
Zones

Piping Class 203
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/3
System
De pres
Isometric code

Op tem
Page 1

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.47 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|------|----|------------|---|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,65 | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 7,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 30,99 | | |
| 1522 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 3,83 | | |
| 1525 | 2 | 0 | In | 3,91 | | mm | ,00 | 5,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 30,51 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 2872 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5384 | 13,26 | | |
| 5004 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5133 | 11,22 | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 0,80 | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 4,20 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 4,40 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | |
| 163 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,19 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 4,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 1,50 | | |
| 334 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP316 | | 0,28 | | |
| 337 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP316 | | 1,36 | | |
| 1775 | 2 | 1+1/2 | In | 3,91 | 3,68 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | |

FLANGE S.O. ASME B16.5 FOR JACKET 150#RF
ASTM A403 GR. WP316 Tp A - DN 2" N. 1 pz.

- DN 1" N. 2 pz.

PSV_33.15
PCV_33.2
PL_33.11
FO_33.11

Plant SX1 SULPHUREX GH/F
Line 33023 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 216
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1408/3
System
De pres
Isometric code

Op tem

Page 1

| | | | | | | | | |
|-----------|---------------------|------------------------|----------------|-------------|----------|---------|------------|-----------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 | |
| PUMA5 | 13/04/2010 11.47.47 | | DOC: | 1E35-65-029 | | | | |
| Ballestra | | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|----|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1787 | 2 | 1 | In | 3,91 | 3,38 | mm | ,00 | 1,00 | NR | 216 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP316 | | 0,44 | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,86 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | |
| 1215 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP316 Type A | | 0,16 | | |
| 1218 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP316 Type A | | 0,96 | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 12,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,44 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 6,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,72 | | |
| 5132 | 1/2 | 0 | In | | | mm | 115,00 | 6,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,90 | | |
| 5133 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,84 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,46 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,84 | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 3,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 4,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 32,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 4,80 | | |

FLANGE S.O. ASME B16.5 FOR JACKET 150#RF
ASTM A403 GR. WP316 Tp A - DN 2" N. 1 pz.

- DN 1" N. 2 pz.

PSV_33.15
PCV_33.2
PL_33.11
FO_33.11

Plant SX1 SULPHUREX GH/F
Line 33023 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 216
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1408/3
System
De pres
Isometric code

Op tem

Page 2

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|--|------------------------|-----|-----|------------|-----------|-----------|-------|----------|-----------|-------------|--------|-----------|-------------|-----------|--------|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.47.47 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 120,43 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33023 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 120,43 | | | | | | |

| | | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|--|
| FLANGE S.O. ASME B16.5 FOR JACKET 150#RF ASTM A403 GR. WP316 Tp A - DN 2" N. 1 pz. - DN 1" N. 2 pz. PSV_33.15 PCV_33.2 PL_33.11 FO_33.11 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line | 33023 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | | |
| | Zones | | | | | Page 3 | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|----|---------------------|------------|----|--------|------------------------|-----|------------|--|-----------|-------------|-------------|----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.47 | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 2,53 | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 0,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 2,72 | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 6,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 40,33 | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 2,40 | | | | |
| 1646 | 3 | 2 | In | 3,18 | 3,91 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 0,57 | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 12,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,32 | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 49,87 | | |
| SX1 | SULPHUREX GH/F | | | | 33023J - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 49,87 | | |

REDUCER CONCENTRIC FOR JACKET - API 5L Gr. B - SIZE 2"x49 = N. 2

REDUCER CONCENTRIC FOR JACKET - API 5L Gr. B - SIZE 3"x78 = N. 1

SPACERS 10x5x50 = 6 pz.

Plant SX1 SULPHUREX GH/F

Line 33023J - 0

Dang. fluid type

Area SX1

Zones

Piping Class 203

Fluid

Coating

Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/3

System

De pres

Isometric code

Op tem

Page 1

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.47 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|-----|----|------|------|-----------|--------|-------|----|------------|---|-----------|-------------|--------|-----------------|--|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,29 | | | |
| 1505 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 3,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 6,02 | | | |
| 2854 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 1,94 | | | |
| 2863 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,92 | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,40 | | | |
| 447 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,70 | | | |
| 328 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 4,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,35 | | | |
| 1762 | 3/4 | 1/2 | In | 2,87 | 2,77 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,06 | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,08 | | | |
| 1208 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,10 | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 711 | 3/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 14,11 | | |
| SX1 | SULPHUREX GH/F | | | | | 33025 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: 14,11 | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33025 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|---------------------|------------------------|----|------|----------------|-----------|--------|-------|----|------------|---|-----------|-------------|-----------|--------|------------|
| PUMA5 | 13/04/2010 11.47.48 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 10,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 12,92 | | | |
| 2853 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 1,63 | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | |
| 4999 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5125 | 3,06 | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 1,60 | | | |
| 4684 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F304 | | 0,57 | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 4,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,34 | | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | | |
| 5130 | 1/2 | 0 | In | | | mm | 105,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,12 | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 24,63 | | |
| SX1 | SULPHUREX GH/F | | | | | 33026 - 0 | | | | | SX1 SX1 | 1 / 1 | | TOTAL Kg: | | 24,63 |

| | | | | | | |
|-----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PSV_33.16 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33026 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|--------|--|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.48 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,28 | | | | | | | | | | | | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 0,80 | | | | | | | | | | | | | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,28 | | | | | | | | | | | | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,16 | | | | | | | | | | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | | | | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 2,99 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33028 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 2,99 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33028 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.48 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|----|----|------|------|----|--------|------|----|------------|--|-----------|-------------|--------|--------|
| 1505 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 1,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 2,58 | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 8,26 | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,50 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 6,91 | | |
| 2854 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 1,94 | | |
| 2863 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,92 | | |
| 2866 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 3,27 | | |
| 447 | 3/4 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 2,10 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | |
| 328 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 3,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,26 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,75 | | |
| 1791 | 3 | 2 | In | 2,11 | 3,91 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,39 | | |
| 4512 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Cap ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,28 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 6,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,72 | | |
| 5130 | 1/2 | 0 | In | | | mm | 105,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,28 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,46 | | |
| 5140 | 5/8 | 0 | In | | | mm | 125,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,54 | | |

| | | | | | | | |
|--|------------------|-------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33029 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | 13/04/2010 | |
|------------|----------------|----|---------------------|----|----|----|------------------------|-------|-----|------------|---|-----------|------------------|-----------|-----------|------------|--|
| PUMA5 | | | 13/04/2010 11.47.48 | | | | | | | | | | DOC: 1E35-65-029 | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 711 | 3/4 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 33,14 | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33029 - 0 | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | 33,14 | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33029 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | |

| | | | | | |
|------------------|----------------------------|-------------------------------|-------------------------|----------------|-----------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: 1E35 | REV: 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.48 | | DOC: 1E35-65-029 | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C |
| | | | Pres: BAR | | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|------|----|------------|---|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,51 | | |
| 1508 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 4,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 16,53 | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 4,61 | | |
| 1528 | 4 | 0 | In | 2,11 | | mm | ,00 | 0,30 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 1,79 | | |
| 2866 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 3,27 | | |
| 4996 | 1+1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | "Y" Valve Globe ST.46347/2 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 D 75 | 5127 | 20,41 | | |
| 450 | 1+1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5129 | 8,40 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 8,20 | | |
| 163 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,38 | | |
| 331 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 4,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 1,50 | | |
| 5789 | 3 | 1+1/2 | In | 2,11 | 3,68 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,39 | | |
| 2218 | 4 | 2 | In | 2,11 | 3,91 | mm | ,00 | 1,00 | NR | 215 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 2220 | 4 | 3 | In | 2,11 | 2,11 | mm | ,00 | 1,00 | NR | 215 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,58 | | |
| 1049 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | |

| | | | | | |
|--------------------------------|---|--|--|--------|--------|
| TL_33.4 PCV_33.1 PI_33.6 | Plant SX1 SULPHUREX GH/F Line 33030 - 0 Dang. fluid type Area SX1 Zones | Piping Class 215 Fluid Coating Sketch Sht 1 / 1 | Welding specification SP.1406/2-SP.1408/3 System De pres Isometric code | Op tem | Page 1 |
|--------------------------------|---|--|--|--------|--------|

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.48 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-------|----|----|------|----|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1051 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | |
| 1211 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 6,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 1,71 | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | |
| 1220 | 3 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,80 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | |
| 5129 | 1/2 | 0 | In | | | mm | 85,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,44 | | |
| 5132 | 1/2 | 0 | In | | | mm | 115,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,60 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,46 | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | |
| 5140 | 5/8 | 0 | In | | | mm | 125,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,54 | | |
| 5142 | 5/8 | 0 | In | | | mm | 135,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,12 | | |
| 714 | 1+1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 79,09 | | |

| | | | | | | | |
|-----|----------------|-----------|-----|-----|-------|-----------|-------|
| SX1 | SULPHUREX GH/F | 33030 - 0 | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 79,09 |
|-----|----------------|-----------|-----|-----|-------|-----------|-------|

| | | | | | | | |
|--------------------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| TL_33.4 PCV_33.1 PI_33.6 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33030 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.48 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|----|----|--------|------|----|------------|---|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,26 | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 2,55 | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 0,30 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 1,38 | | |
| 1535 | 16 | 0 | In | 4,19 | | mm | ,00 | 4,50 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 190,82 | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 4,10 | | |
| 461 | 16 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5169 | 208,00 | | |
| 5074 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Blind + Disk ASME B16.5 - TA 50.63/3 (DISK) 150 LB RF (125÷250 AARH) Forged FLG: ASTM A 105 Galvanized - DISK: A240 TYPE 304 | 5137 | 5,33 | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,14 | | |
| 347 | 16 | 0 | In | 4,19 | | mm | ,00 | 3,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 120,18 | | |
| 1049 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | |
| 1051 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | |
| 1220 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 0,40 | | |
| 1228 | 16 | 0 | In | 4,19 | | mm | ,00 | 4,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 32,15 | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,92 | | |
| 5142 | 5/8 | 0 | In | | | mm | 135,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,12 | | |

TI_33.9
 LT_33.1
 PI_33.9
 STUD BOLT + 2 NUTS TA 50.48b/28 ASME 18.2.1
 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H
 GALVANIZED -5/8"x160 = N. 4 pz.

Plant SX1 SULPHUREX GH/F
 Line 33031 - 0
 Dang. fluid type
 Area SX1
 Zones

Piping Class 215
 Fluid
 Coating
 Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1408/3
 System
 De pres
 Isometric code
 Op tem

Page 1

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|----|----|----|------------------------|-------|-----|------------|---|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.49 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 5169 | 1 | 0 | In | | | mm | 160,00 | 48,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 89,76 | | | | | | | | | | |
| 5171 | 1 | 0 | In | | | mm | 180,00 | 16,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 32,00 | | | | | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 725 | 16 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 690,54 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33031 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 690,54 | | | | | | | | |

| | | | | |
|---|---|--|--|------------------|
| TL_33.9 LT_33.1 PL_33.9 STUD BOLT + 2 NUTS TA 50.48b/28 ASME 18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H GALVANIZED -5/8"x160 = N. 4 pz. | Plant SX1 SULPHUREX GH/F Line 33031 - 0 Dang. fluid type Area SX1 Zones | Piping Class 215 Fluid Coating Sketch Sht 1 / 1 | Welding specification SP.1406/2-SP.1408/3 System De pres Isometric code | Op tem Page 2 |
|---|---|--|--|------------------|

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|-------|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|----------|-------------|----------|-----------|------------|
| PUMA5 | | | | 13/04/2010 11.47.49 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1507 | 1+1/4 | 0 | In | 3,56 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,73 | | | | | |
| 1509 | 2 | 0 | In | 3,91 | | mm | ,00 | 5,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 27,74 | | | | | |
| 2858 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5384 | 6,63 | | | | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 2,20 | | | | | |
| 164 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 215 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,64 | | | | | |
| 1774 | 2 | 1+1/4 | In | 3,91 | 3,56 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,44 | | | | | |
| 1212 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,48 | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 43,18 | | | | |
| SX1 | SULPHUREX GH/F | | | | 33032 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 43,18 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33032 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.49 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|----|----|------|-----------|----|--------|------|-----|------------|--|-----------|-------------|--------|--------|--|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,29 | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 10,21 | | | |
| 1507 | 1+1/4 | 0 | In | 3,56 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,73 | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | |
| 5001 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 R 92 | 5126 | 4,59 | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 1,60 | | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 3,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,41 | | | |
| 1767 | 1+1/4 | 1 | In | 3,56 | 3,38 | mm | ,00 | 1,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,18 | | | |
| 1049 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,32 | | | |
| 5126 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | | |
| 5131 | 1/2 | 0 | In | | | mm | 110,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,60 | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 23,18 | | |
| SX1 | SULPHUREX GH/F | | | | 33033 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 23,18 | |

| | | | | | | | |
|--------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| LY_33.2 PI_33.2 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33033 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 | |
|------------|----------------|----|---------------------|------|-----------|----|------------------------|-------|-----|------------|---|-----------|-------------|-------------|----------|-----------|---|------------|--|
| PUMA5 | | | 13/04/2010 11.47.49 | | | | | | | | | | DOC: | 1E35-65-029 | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 0,65 | | | | | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 5,50 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 25,34 | | | | | | |
| 6030 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5385 | 14,28 | | | | | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 12,30 | | | | | | |
| 339 | 3 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 1,59 | | | | | | |
| 1049 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,24 | | | | | | |
| 1220 | 3 | 0 | In | 2,11 | | mm | ,00 | 3,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 1,20 | | | | | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,92 | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,56 | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 60,09 | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33034 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 60,09 | | | | |

| | | | | | | |
|----------------------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PI_33.10 PT_33.10 | Plant | SX1 SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33034 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|------------------|--------|-----------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.49 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 8,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 20,43 | | | | | | | | | |
| 329 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,14 | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 20,56 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33035 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 20,56 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33035 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|------------------|--------|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.47.49 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1527 | 3 | 0 | In | 2,11 | | mm | ,00 | 4,00 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 18,43 | | | | | | | | | | |
| 339 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 0,80 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 19,23 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33036 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 19,23 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33036 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.49 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|------|----|--------|------|----|------------|---|-----------|-------------|--------|--------|
| 1525 | 2 | 0 | In | 3,91 | | mm | ,00 | 0,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 2,77 | | |
| 1540 | 3 | 0 | In | 2,11 | | mm | ,00 | 0,80 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 3,69 | | |
| 1544 | 8 | 0 | In | 2,77 | | mm | ,00 | 3,00 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 45,23 | | |
| 2872 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5384 | 6,63 | | |
| 4904 | 8 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Sight Glass ST.46353/1 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M FG 64 | 5146 | 112,24 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 4,40 | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 8,20 | | |
| 457 | 8 | 0 | In | | | mm | ,00 | 3,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5150 | 37,80 | | |
| 188 | 8 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | 45° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 3,84 | | |
| 1839 | 4 | 3 | In | 2,11 | 2,11 | mm | ,00 | 1,00 | NR | 216 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 0,58 | | |
| 1848 | 8 | 4 | In | 2,77 | 2,11 | mm | ,00 | 1,00 | NR | 216 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 2,26 | | |
| 1218 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP316 Type A | | 0,96 | | |
| 1233 | 3 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 0,80 | | |
| 1237 | 8 | 0 | In | 2,77 | | mm | ,00 | 3,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 6,02 | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |

| | | | |
|-----------------|---------------------------------|-------------------------|--|
| 33Y2 LT_33.1 | Plant SX1 SULPHUREX GH/F | Piping Class 216 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 33037 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Op tem |
| | Zones | | Isometric code |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|----|----|-----------|------------------------|-------|----|------------|---|-----------|-------------|----------|-------------|--------|----------|------------|
| PUMA5 | | | 13/04/2010 11.47.50 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,92 | | | | | |
| 5146 | 3/4 | 0 | In | | | mm | 110,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,04 | | | | | |
| 5150 | 3/4 | 0 | In | | | mm | 130,00 | 24,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 23,04 | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| 721 | 8 | 0 | In | | | mm | ,00 | 4,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 270,75 | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33037 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 270,75 | | |

| | | | | | | | |
|-----------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 33Y2 LT_33.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33037 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | Page 2 | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.50 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|------|----|--------|------|----|------------|--|-----------|-------------|--------|--------|
| 1520 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 0,65 | | |
| 1522 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 1,28 | | |
| 1525 | 2 | 0 | In | 3,91 | | mm | ,00 | 0,20 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 1,11 | | |
| 1541 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,50 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 14,89 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 2872 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5384 | 6,63 | | |
| 6033 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5385 | 21,43 | | |
| 451 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5135 | 4,40 | | |
| 453 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5137 | 4,10 | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 5,60 | | |
| 337 | 2 | 0 | In | 3,91 | | mm | ,00 | 1,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 403 GR. WP316 | | 0,68 | | |
| 353 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 2,80 | | |
| 2264 | 4 | 3 | In | 2,11 | 2,11 | mm | ,00 | 1,00 | NR | 216 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 0,58 | | |
| 1071 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F316 | | 0,24 | | |
| 1073 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F316 | | 0,61 | | |
| 1218 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP316 Type A | | 0,96 | | |

| | | | | | | |
|---|------------------|----------------|--------------|-------|-----------------------|---------------------|
| TE_33.1 TI_33.2 PSH_33.1 PI_33.4 | Plant SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33038 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.50 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1233 | 3 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 0,40 | | | | | | | | | | | |
| 1234 | 4 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 0,62 | | | | | | | | | | | |
| 5135 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | | | | | | | | | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 2,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | | | | | | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,00 | | | | | | | | | | | |
| 715 | 2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5384 | 5/8 | 0 | In | | | mm | 40,00 | 16,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 2,40 | | | | | | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 32,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 5,12 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 78,61 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33038 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 78,61 | | | | | | | |

| | | | | | | | |
|---|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| TE_33.1 TI_33.2 PSH_33.1 PI_33.4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33038 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | | Page 2 |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|----|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.50 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1520 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 0,26 | | | | | | | | | | |
| 1522 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 2,55 | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | | | | | | |
| 2869 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5381 | 2,86 | | | | | | | | | | |
| 6024 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | "Y" Valve Globe ST.46347/2 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 D 75 | 5126 | 5,10 | | | | | | | | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 3,20 | | | | | | | | | | |
| 1215 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP316 Type A | | 0,65 | | | | | | | | | | |
| 5126 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | | | | | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | | | | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 4,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 18,01 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33039 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 18,01 | | | | | | | | |

AE_33.1

Plant SX1 SULPHUREX GH/F
Line 33039 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 216
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1408/3
System
De pres
Isometric code

Op tem

Page 1

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.50 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-----|----|----|------|----|----|--------|------|----|------------|---|-----------|-------------|--------|--------|
| 1520 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 1,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 1,94 | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,80 | | |
| 1213 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP316 Type A | | 0,17 | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,96 | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 3,87 | | |

| | | | | | | | | | | |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|------|
| SX1 | SULPHUREX GH/F | | 33041 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 3,87 |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|------|

| | | | | | | | |
|--|------------------|-------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33041 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.50 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1520 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 11,00 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 14,21 | | | | | | | | | | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | | | | | | | | | | |
| 2867 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5381 | 1,63 | | | | | | | | | | | |
| 5006 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | "Y" Valve Check ST.46360/5 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F316 R 92 | 5125 | 3,06 | | | | | | | | | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 8,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 3,20 | | | | | | | | | | | |
| 4695 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F316 | | 0,57 | | | | | | | | | | | |
| 1213 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP316 Type A | | 0,68 | | | | | | | | | | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | | | | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 24,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,88 | | | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 8,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 28,66 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33042 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 28,66 | | | | | | | |

| | | | | | | |
|----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PSV_33.4 | Plant | SX1 SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33042 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.50 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1541 | 4 | 0 | In | 2,11 | | mm | ,00 | 6,50 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 38,72 | | | | | | | | | | | |
| 6033 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5385 | 21,43 | | | | | | | | | | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 11,20 | | | | | | | | | | | |
| 353 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 2,80 | | | | | | | | | | | |
| 1234 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,25 | | | | | | | | | | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,00 | | | | | | | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 32,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 5,12 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 82,51 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33043 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 82,51 | | | | | | | | | |

| | | | | | | | |
|-------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| CHAIN mt. 4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33043 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.51 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|----------------|----|----|------|-----------|----|--------|-------|-----|------------|---|-----------|-------------|--------|--------|
| 1520 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,20 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 0,26 | | |
| 1522 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 0,51 | | |
| 1541 | 4 | 0 | In | 2,11 | | mm | ,00 | 9,50 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 56,59 | | |
| 6033 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5385 | 21,43 | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 5,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 28,00 | | |
| 456 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5147 | 7,50 | | |
| 353 | 4 | 0 | In | 2,11 | | mm | ,00 | 5,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 7,00 | | |
| 1846 | 6 | 4 | In | 2,77 | 2,11 | mm | ,00 | 1,00 | NR | 216 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 1,55 | | |
| 1234 | 4 | 0 | In | 2,11 | | mm | ,00 | 5,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 3,12 | | |
| 1236 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,33 | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 32,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 8,00 | | |
| 5147 | 3/4 | 0 | In | | | mm | 115,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,20 | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 5,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 720 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 32,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 5,12 | | |
| M Erection | | | | | | | | | | | | Total Kg: | 147,6 | | |
| SX1 | SULPHUREX GH/F | | | | 33044 - 0 | | | | SX1 | SX1 | 1 / 1 | TOTAL Kg: | 147,6 | | |

| | | | | | | | |
|-------------------------------|------------------|-------|----------------|--------------|-------|-----------------------|---------------------|
| AE_33.2 TE_33.2 PI_33.5 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33044 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.51 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-------|-------|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1539 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 0,20 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 0,75 | | |
| 1543 | 6 | 0 | In | 2,77 | | mm | ,00 | 2,00 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 23,07 | | |
| 2922 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Butterfly ST.46440/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M B 81 | 5154 | 15,31 | | |
| 452 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5136 | 3,60 | | |
| 456 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5147 | 7,50 | | |
| 355 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 4,04 | | |
| 2269 | 6 | 2+1/2 | In | 2,77 | 2,11 | mm | ,00 | 1,00 | NR | 216 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 1,55 | | |
| 1232 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 0,32 | | |
| 1236 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,33 | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |
| 5145 | 3/4 | 0 | In | | | mm | 100,00 | -8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | -6,72 | | |
| 5147 | 3/4 | 0 | In | | | mm | 115,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,20 | | |
| 5154 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 8,48 | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 720 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 67,36 | | |

| | | | | | |
|--|--------------------------|--------------|-------|-----------------------|---------------------|
| | Plant SX1 SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line 33045 - 0 | Fluid | | System | |
| | Dang. fluid type | Coating | | De pres | Op tem |
| | Area SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | |

| | | | | | | | | | | | | | | | | | | | | | |
|-----------|----------------|---------------------|--|------------------------|-----------|--|--------|-----|----|------------|-----------|------------------|-------|---------|--|------------|-----------|-------------|--------|----------|--|
| Ballestra | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | 13/04/2010 11.47.51 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| SX1 | SULPHUREX GH/F | | | | 33045 - 0 | | | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 67,36 | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33045 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | | |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.51 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|------------------|--|--|--|-----------------------|--|--|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|--|--|-----------------------|--|--|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1520 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 0,65 | | |
| 1524 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 0,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 2,07 | | |
| 1543 | 6 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 92,30 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 2866 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 3,27 | | |
| 2922 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Butterfly ST.46440/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M B 81 | 5154 | 15,31 | | |
| 452 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5136 | 3,60 | | |
| 456 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5147 | 15,00 | | |
| 355 | 6 | 0 | In | 2,77 | | mm | ,00 | 4,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 16,17 | | |
| 2269 | 6 | 2+1/2 | In | 2,77 | 2,11 | mm | ,00 | 1,00 | NR | 216 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 1,55 | | |
| 1071 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F316 | | 0,12 | | |
| 1232 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 0,32 | | |
| 1236 | 6 | 0 | In | 2,77 | | mm | ,00 | 2,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 2,66 | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |
| 5145 | 3/4 | 0 | In | | | mm | 100,00 | -8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | -6,72 | | |

| | | | |
|-----------|---------------------------------|-------------------------|--|
| PISH_33.7 | Plant SX1 SULPHUREX GH/F | Piping Class 216 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 33046 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Op tem |
| | Zones | Isometric code | Page 1 |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.51 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 5147 | 3/4 | 0 | In | | | mm | 115,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,20 | | | | | | | | | | | | |
| 5154 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 8,48 | | | | | | | | | | | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| 720 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 163,6 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33046 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 163,6 | | | | | | | | | | |

| | | | | | | | |
|-----------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| PISH_33.7 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33046 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | | Page 2 |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | 1E35 | | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|-----------|----|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|-------------|----------|-----------|----------|------------|
| PUMA5 | | | 13/04/2010 11.47.51 | | | | | | | | | | | | DOC: | 1E35-65-029 | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1541 | 4 | 0 | In | 2,11 | | mm | ,00 | 6,50 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 38,72 | | | | | | | |
| 6033 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5385 | 21,43 | | | | | | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 3,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 16,80 | | | | | | | |
| 353 | 4 | 0 | In | 2,11 | | mm | ,00 | 5,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 7,00 | | | | | | | |
| 1234 | 4 | 0 | In | 2,11 | | mm | ,00 | 3,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,87 | | | | | | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 16,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 4,00 | | | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 3,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 32,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 5,12 | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 94,93 | | | | | | |
| SX1 | SULPHUREX GH/F | | | 33047 - 0 | | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 94,93 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33047 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.51 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1543 | 6 | 0 | In | 2,77 | | mm | ,00 | 3,00 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 34,61 | | | | | | | | | | | | | | |
| 456 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5147 | 7,50 | | | | | | | | | | | | | | |
| 355 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 4,04 | | | | | | | | | | | | | | |
| 1236 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,33 | | | | | | | | | | | | | | |
| 5147 | 3/4 | 0 | In | | | mm | 115,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,20 | | | | | | | | | | | | | | |
| 720 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 54,68 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33048 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 54,68 | | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33048 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.52 | | | | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1541 | 4 | 0 | In | 2,11 | | mm | ,00 | 3,00 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 17,87 | | | | | | | | | | | | | | |
| 6033 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5385 | 21,43 | | | | | | | | | | | | | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 11,20 | | | | | | | | | | | | | | |
| 456 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5147 | 7,50 | | | | | | | | | | | | | | |
| 353 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 2,80 | | | | | | | | | | | | | | |
| 1846 | 6 | 4 | In | 2,77 | 2,11 | mm | ,00 | 1,00 | NR | 216 | Reducer Concentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 1,55 | | | | | | | | | | | | | | |
| 1234 | 4 | 0 | In | 2,11 | | mm | ,00 | 2,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,25 | | | | | | | | | | | | | | |
| 1236 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,33 | | | | | | | | | | | | | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,00 | | | | | | | | | | | | | | |
| 5147 | 3/4 | 0 | In | | | mm | 115,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,20 | | | | | | | | | | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| 720 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 32,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 5,12 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 79,25 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33049 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 79,25 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33049 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|----------|-------------|----------|-----------|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.52 | | DOC: | 1E35-65-029 | | | |
| Ballestra | | SULPHUREX GH/F | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-------|-------|----|------|------|----|--------|-------|----|------------|---|------------------|--------------|--------|--------|
| 1539 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 0,20 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 0,75 | | |
| 1543 | 6 | 0 | In | 2,77 | | mm | ,00 | 2,00 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 23,07 | | |
| 2922 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Butterfly ST.46440/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M B 81 | 5154 | 15,31 | | |
| 452 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5136 | 3,60 | | |
| 456 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5147 | 7,50 | | |
| 355 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 4,04 | | |
| 2269 | 6 | 2+1/2 | In | 2,77 | 2,11 | mm | ,00 | 1,00 | NR | 216 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 1,55 | | |
| 1232 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 0,32 | | |
| 1236 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,33 | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |
| 5145 | 3/4 | 0 | In | | | mm | 100,00 | -8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | -6,72 | | |
| 5147 | 3/4 | 0 | In | | | mm | 115,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,20 | | |
| 5154 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 8,48 | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 720 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 67,36 | | |

| | | | | | | | |
|--|-------------------------|-----------------------|---------------------|-------|------------------------------|---------------------|--|
| | Plant SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line | 33050 - 0 | Fluid | | System | | |
| | Dang. fluid type | | Coating | | De pres | | |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | | |
| | Zones | | | | Op tem | | |
| | | | | | Page | 1 | |

| | | | | | | | | | | | | | | | | | | | | | |
|-----------|----------------|---------------------|--|------------------------|----|--|-----------|-----|----|------------|-----------|------------------|-------|---------|--|------------|-----------|-------------|--------|----------|--|
| Ballestra | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | 13/04/2010 11.47.52 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| SX1 | SULPHUREX GH/F | | | | | | 33050 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 67,36 | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33050 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | | |

| | | | | | | | |
|------------------|----------------------------|-------------------------------|--------------|-------------|-------------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMAS | 13/04/2010 11.47.52 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|------------------|--|-----------------------|--|-----------------|----------------|-----------------|------------------|-----------------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-------|-------|----|------|------|----|--------|-------|----|------------|--|-----------|-------------|--------|--------|
| 1520 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 0,65 | | |
| 1524 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 0,50 | m | 216 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 316 | | 2,07 | | |
| 1543 | 6 | 0 | In | 2,77 | | mm | ,00 | 5,50 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 63,45 | | |
| 2862 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 0,71 | | |
| 2866 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 3,27 | | |
| 2922 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Butterfly ST.46440/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 351 GR. CF8M B 81 | 5154 | 15,31 | | |
| 452 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5136 | 3,60 | | |
| 456 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5147 | 15,00 | | |
| 2269 | 6 | 2+1/2 | In | 2,77 | 2,11 | mm | ,00 | 1,00 | NR | 216 | Reducer Eccentric ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 1,55 | | |
| 1232 | 2+1/2 | 0 | In | 2,11 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 0,32 | | |
| 1236 | 6 | 0 | In | 2,77 | | mm | ,00 | 2,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 2,66 | | |
| 5136 | 5/8 | 0 | In | | | mm | 100,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,92 | | |
| 5145 | 3/4 | 0 | In | | | mm | 100,00 | -8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | -6,72 | | |
| 5147 | 3/4 | 0 | In | | | mm | 115,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,20 | | |
| 5154 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 8,48 | | |
| 716 | 2+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |

| | | | | |
|-----------|-------------------------|-----------------------|-------------------------|--|
| PISH_33.8 | Plant SX1 | SULPHUREX GH/F | Piping Class 216 | Welding specification SP.1406/2-SP.1408/3 |
| | Line 33051 - 0 | | Fluid | System |
| | Dang. fluid type | | Coating | De pres |
| | Area SX1 | | Sketch Sht 1 / 1 | Op tem |
| | Zones | | | Isometric code |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|--|-----|--|-----|--|-------|-----------|--|-------------|-----------|----------|-------------|-----------|--------|------------|--------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | | |
| PUMA5 | | | | 13/04/2010 11.47.52 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | | Weight (Kg) | | As.bly | | Branch | |
| 720 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | | Total Kg: | | 118,47 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33051 - 0 | | | | | | SX1 | | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 118,47 | | | | | |

| | | | | | | |
|-----------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| PISH_33.8 | Plant | SX1 SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33051 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 2 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.52 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1541 | 4 | 0 | In | 2,11 | | mm | ,00 | 6,50 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 38,72 | | | | | | | | | | | |
| 6033 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | 5385 | 21,43 | | | | | | | | | | | |
| 454 | 4 | 0 | In | | | mm | ,00 | 3,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5138 | 16,80 | | | | | | | | | | | |
| 353 | 4 | 0 | In | 2,11 | | mm | ,00 | 5,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 7,00 | | | | | | | | | | | |
| 1234 | 4 | 0 | In | 2,11 | | mm | ,00 | 3,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,87 | | | | | | | | | | | |
| 5138 | 5/8 | 0 | In | | | mm | 110,00 | 16,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 4,00 | | | | | | | | | | | |
| 718 | 4 | 0 | In | | | mm | ,00 | 3,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5385 | 5/8 | 0 | In | | | mm | 45,00 | 32,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 5,12 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 94,93 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33052 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 94,93 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33052 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.52 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1543 | 6 | 0 | In | 2,77 | | mm | ,00 | 3,00 | m | 216 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 316 | | 34,61 | | | | | | | | | | | | | | |
| 456 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5147 | 7,50 | | | | | | | | | | | | | | |
| 355 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP316 | | 4,04 | | | | | | | | | | | | | | |
| 1236 | 6 | 0 | In | 2,77 | | mm | ,00 | 1,00 | NR | 216 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP316 Type A | | 1,33 | | | | | | | | | | | | | | |
| 5147 | 3/4 | 0 | In | | | mm | 115,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 7,20 | | | | | | | | | | | | | | |
| 720 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 54,68 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33053 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 54,68 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33053 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.53 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 3,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,80 | | | | | | | | | | | |
| 2874 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Ball Full Port ST.46739/1 LUG 150 LB RF (125÷250 AARH) Forged CARBON STEEL S 152 | 5373 | 1,60 | | | | | | | | | | | |
| 2984 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Check ST.46275/1 SW-F 800# Forged ASTM A 105 R 83 | | 1,90 | | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | | | | | | | | | |
| 231 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 205 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 1,20 | | | | | | | | | | | |
| 1254 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 205 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| 5373 | 1/2 | 0 | In | | | mm | 30,00 | 8,00 | NR | 205 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 | | 0,64 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 10,68 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33054 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 10,68 | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 33054 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.53 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1456 | 5 | 0 | In | 3,96 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 2,68 | | | | | | | | | | | |
| 1458 | 8 | 0 | In | 3,96 | | mm | ,00 | 12,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 262,61 | | | | | | | | | | | |
| 302 | 8 | 0 | In | 3,96 | | mm | ,00 | 3,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 29,70 | | | | | | | | | | | |
| 2092 | 8 | 5 | In | 3,96 | 3,96 | mm | ,00 | 1,00 | NR | 203 | Reducer Eccentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 3,17 | | | | | | | | | | | |
| 4465 | 8 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 2,65 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 300,82 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33101 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 300,82 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33101 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-------------|--|---------|--|----------|--|------------|--|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.53 | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 10,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 25,02 | | | | | | | | | | | |
| 2986 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Check ST.46275/1 SW-F 800# Forged ASTM A 105 R 83 | | 4,80 | | | | | | | | | | | |
| 3125 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Valve Globe ST.46274/3 SW-F 800# Forged ASTM A 105 D 72 | | 5,40 | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 5,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,68 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 35,9 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33102 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 35,9 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 205 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | 33102 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.53 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 12,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 104,57 | | | | | | | | | | |
| 5024 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5210 | 9,00 | | | | | | | | | | |
| 3181 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Strainer Y-Type ST.46349/3 FLG 150 LB RF (125÷250 AARH) Cast ASTM A 216 GR. WCB F 71 | 5201 | 34,00 | | | | | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 8,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 44,80 | | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 8,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 16,54 | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 32,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 7,36 | | | | | | | | | | |
| 5210 | 5/8 | 0 | In | | | mm | 145,00 | 16,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 4,80 | | | | | | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 5,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 221,06 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33103 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 221,06 | | | | | | | | |

| | | | | | | | |
|---------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| TV_33.9 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33103 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|------|------|----|------------------------|-------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.47.53 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,25 | | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 0,20 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 1,74 | | | | | | | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 12,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 192,58 | | | | | | | | | | |
| 1662 | 6 | 4 | In | 3,96 | 3,18 | mm | ,00 | 1,00 | NR | 203 | Reducer Concentric ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,18 | | | | | | | | | | |
| 1058 | 1 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,60 | | | | | | | | | | |
| 1124 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,06 | | | | | | | | | | |
| 4464 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | Cap ASME B16.9 BE Seamless ASTM A 234 GR. WPB | | 2,02 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 200,43 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33104 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 200,43 | | | | | | | | |

TET_33.9
TI_33.8
PI_33.13

Plant SX1 SULPHUREX GH/F
Line 33104 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 203
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/3
System
De pres
Isometric code

Op tem
Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.53 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,72 | | | | | | | | | | | |
| 5023 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5209 | 3,50 | | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 12,30 | | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | | | | | | | | |
| 5209 | 5/8 | 0 | In | | | mm | 140,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,16 | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 27,88 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33105 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 27,88 | | | | | | | |

| | | | | | | | |
|-------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 33Y1C | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33105 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.53 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,72 | | | | | | | | | | |
| 5023 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5209 | 3,50 | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 12,30 | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | | | | | | | |
| 5209 | 5/8 | 0 | In | | | mm | 140,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,16 | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 27,88 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33106 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 27,88 | | | | | | | | |

| | | | | | | | |
|-------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 33Y1B | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33106 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.54 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,72 | | | | | | | | | | |
| 5023 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5209 | 3,50 | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 12,30 | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | | | | | | | |
| 5209 | 5/8 | 0 | In | | | mm | 140,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,16 | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 27,88 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33107 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 27,88 | | | | | | | | |

| | | | | | | | |
|-------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 33Y1A | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33107 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.54 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,72 | | | | | | | | | | | |
| 3006 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46357/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 36 CADMIUM PLATED R 87 | 5204 | 1,60 | | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 12,30 | | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | | | | | | | | |
| 5204 | 5/8 | 0 | In | | | mm | 110,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,00 | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 25,82 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33108 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 25,82 | | | | | | | | | |

| | | | | | | | |
|-------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 33Y1D | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33108 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.54 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,72 | | | | | | | | | | | |
| 3006 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46357/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 36 CADMIUM PLATED R 87 | 5204 | 1,60 | | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 12,30 | | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | | | | | | | | |
| 5204 | 5/8 | 0 | In | | | mm | 110,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,00 | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 25,82 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33109 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 25,82 | | | | | | | |

| | | | | | | | |
|-------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 33Y1E | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33109 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|--------|----------|--|-------------|-----------|----------|-------|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.54 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1453 | 3 | 0 | In | 3,18 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 6,72 | | | | | | | | | | | |
| 3006 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46357/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 36 CADMIUM PLATED R 87 | 5204 | 1,60 | | | | | | | | | | | |
| 472 | 3 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 12,30 | | | | | | | | | | | |
| 297 | 3 | 0 | In | 3,18 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,35 | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,84 | | | | | | | | | | | |
| 5204 | 5/8 | 0 | In | | | mm | 110,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,00 | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 4,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 25,82 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33110 - 0 | | | | | SX1 | SX1 | 1 / 1 | | | | | TOTAL Kg: | | 25,82 | | | | |

| | | | | | | | |
|-------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| 33Y1F | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33110 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.54 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1454 | 4 | 0 | In | 3,18 | | mm | ,00 | 13,00 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 113,28 | | | | | | | | | | | |
| 3006 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46357/5 WAFER 150 LB RF (125÷250 AARH) Cast ASTM A 36 CADMIUM PLATED R 87 | 5204 | 1,60 | | | | | | | | | | | |
| 473 | 4 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5201 | 11,20 | | | | | | | | | | | |
| 298 | 4 | 0 | In | 3,18 | | mm | ,00 | 5,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 10,33 | | | | | | | | | | | |
| 5201 | 5/8 | 0 | In | | | mm | 95,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,92 | | | | | | | | | | | |
| 5204 | 5/8 | 0 | In | | | mm | 110,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,00 | | | | | | | | | | | |
| 666 | 3 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| 667 | 4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 138,34 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33111 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 138,34 | | | | | | | |

| | | | | | | | |
|--|------------------|-------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33111 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|---|-----------|---------------------|--------|-----------|--|------------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | |
| PUMA5 | | | 13/04/2010 11.47.55 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 9,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,39 | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | |
| 1254 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 12,39 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33112 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 12,39 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33112 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|---|-----------|---------------------|--------|-----------|--|------------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | |
| PUMA5 | | | 13/04/2010 11.47.55 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 9,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,39 | | | | | | | |
| 6021 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46396/3 THRD-F NPT 150 LB Forged BRONZE R 96 | | 0,37 | | | | | | | |
| 1254 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 12,06 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33113 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 12,06 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33113 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.55 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 11,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 13,92 | | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,40 | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 15,46 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33114 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 15,46 | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33114 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|-------|--|--|-----------|-----------|----------|-------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.55 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 11,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | | | | 13,92 | | | | | |
| 6021 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Check ST.46396/3 THRD-F NPT 150 LB Forged BRONZE R 96 | | | | | | | | | | | 0,37 | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | | | | | | | 5191 | 0,40 | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | | | | | | 0,44 | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 15,13 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33115 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 15,13 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33115 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | IE35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|-----|------------|--|-----------|-------------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.55 | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,75 | | | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 7,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 30,37 | | | | | | | | | | |
| 2830 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,60 | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 4,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,47 | | | | | | | | | | |
| 1756 | 1+1/2 | 1 | In | 3,68 | 3,38 | mm | ,00 | 2,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,52 | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 38,08 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33116 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 38,08 | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33116 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|------|----|-----------|------------------------|----|------------|--|-----------|--|-------|--|-----------|-------------|-------------|--------|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.55 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | 3,75 | | | | | | | | |
| 1437 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 2,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | 10,12 | | | | | | | | |
| 3120 | 1+1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | | | | | 3,45 | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | | 5192 | 0,80 | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | | | | | 0,27 | | | | | | | | |
| 326 | 1+1/2 | 0 | In | 3,68 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | | | | | 0,37 | | | | | | | | |
| 1756 | 1+1/2 | 1 | In | 3,68 | 3,38 | mm | ,00 | 2,00 | NR | 203 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | | | | | 0,52 | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | 0,44 | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 19,72 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33117 - 0 | | | | SX1 | SX1 | | 1 / 1 | | TOTAL Kg: | | 19,72 | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33117 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.56 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 2,50 | | | | | | | | | | | | | | |
| 2830 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,60 | | | | | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,14 | | | | | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 4,48 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33118 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 4,48 | | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33118 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|--|------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.56 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,75 | | | | | | | | | | | | | | |
| 3118 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 1,70 | | | | | | | | | | | | | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | | | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,27 | | | | | | | | | | | | | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | | | | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 6,96 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33119 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 6,96 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33119 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|---------------------|--------|-----------|--|------------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | |
| PUMA5 | | | 13/04/2010 11.47.56 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 10,13 | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 10,81 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33120 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 10,81 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33120 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|------------------|--|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.56 | | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 10,13 | | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 11,21 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33121 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 11,21 | | | | | | | | | |

| | | | | | | | |
|--|------------------|-------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33121 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|------------------|--|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.56 | | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 9,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,39 | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 12,07 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33122 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 12,07 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33122 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|------------------|--|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.56 | | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 16,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 20,25 | | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 21,33 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33123 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 21,33 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33123 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.56 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 10,13 | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | |
| 3174 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Strainer Y-Type ST.46326/4 THRD-F NPT 200 LB Forged BRONZE F 70 | | 0,50 | | | | | | | | | | | | |
| 1254 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,30 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 11,23 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33124 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 11,23 | | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33124 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|--|-----|--|-----|--|-----------|----------|-----------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.56 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | | | | 3,16 | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 3,16 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33125 - 0 | | | | | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 3,16 | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33125 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|---|-----|------------|--|-------------|-----------|-------------|-----------|-----------|--------|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.47.57 | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | 3,16 | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | | 0,30 | | | | | |
| 3174 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Strainer Y-Type ST.46326/4 THRD-F NPT 200 LB Forged BRONZE F 70 | | | | | | 0,50 | | | | | |
| 1254 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | | | | | 0,30 | | | | | |
| M Erection | | | | | | | | | | | | | | | Total Kg: | | 4,26 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33126 - 0 | | | | | SX1 | SX1 | 1 / 1 | | | | | TOTAL Kg: | | 4,26 | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33126 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----|--|--|--|-------|-----------|----------|-------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.57 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | | | | 10,13 | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 10,13 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33127 - 0 | | | | SX1 | SX1 | | | | 1 / 1 | | | | TOTAL Kg: | | 10,13 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33127 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|-----------|--------|------------------------|----|------------|--|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.57 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,63 | | | | | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 13,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 70,68 | | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | | |
| 2833 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 2,20 | | | | | | | | | | | | |
| 3179 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Strainer Y-Type ST.46326/4 THRD-F NPT 200 LB Forged BRONZE F 70 | | 5,00 | | | | | | | | | | | | |
| 470 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5199 | 2,20 | | | | | | | | | | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 6,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 3,99 | | | | | | | | | | | | |
| 5199 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,84 | | | | | | | | | | | | |
| 664 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 85,84 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33128 - 0 | | | | | SX1 | SX1 | 1 / 1 | | | | | TOTAL Kg: | | 85,84 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33128 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.57 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 13,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 70,68 | | | | | | | | | | | |
| 2833 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 2,20 | | | | | | | | | | | |
| 470 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5199 | 2,20 | | | | | | | | | | | |
| 159 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,63 | | | | | | | | | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 7,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 4,65 | | | | | | | | | | | |
| 5199 | 5/8 | 0 | In | | | mm | 85,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,84 | | | | | | | | | | | |
| 664 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 81,2 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33129 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 81,2 | | | | | | | |

PSV_33.9

Plant SX1 SULPHUREX GH/F
Line 33129 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 203
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/3
System
De pres
Isometric code

Op tem
Page 1

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|--|-------|----------|--|-------------|-------------|----------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.57 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 4,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | 21,75 | | | | | | |
| 2833 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | | | 2,20 | | | | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 3,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | | | | | | 1,99 | | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 25,94 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33130 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 25,94 | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33130 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|-------|--|--|----------|-----------|-------------|-------|----------|-----------|-------------|--|------------|--------|
| PUMA5 | | | | 13/04/2010 11.47.57 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 4,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | | | | 21,75 | | | |
| 2833 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | | | | | | | 2,20 | | | |
| 327 | 2 | 0 | In | 3,91 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | | | | | | | | | | 1,33 | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 25,28 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33131 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 25,28 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33131 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.57 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|
| Ballestra | | SULPHUREX GH/F | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|----------------|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|----|----|------|----|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,63 | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 14,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 18,08 | | |
| 2853 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) | 5381 | 1,63 | | |
| | | | | | | | | | | | Cast ASTM A 351 CF8 S 123 | | | | |
| 3191 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Strainer Y-Type ST.46350/5 FLG 150 LB RF (125÷250 AARH) Cast | 5125 | 1,53 | | |
| | | | | | | | | | | | ASTM A 351 GR. CF8M F 72 | | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 7,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged | 5127 | 2,80 | | |
| | | | | | | | | | | | ASTM A 105 Galvanized | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged | 5191 | 0,40 | | |
| | | | | | | | | | | | ASTM A 105 | | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 7,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. | | 0,59 | | |
| | | | | | | | | | | | WP304 Type A | | | | |
| 1247 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. | | 0,31 | | |
| | | | | | | | | | | | F304 | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 0,44 | | |
| | | | | | | | | | | | ASTM A 193 B7/ASTM A 194 GR.2H | | | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 0,44 | | |
| | | | | | | | | | | | ASTM A 193 B7/A194 2H Galvanized | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 20,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 2,40 | | |
| | | | | | | | | | | | ASTM A 193 B7/A194 2H Galvanized | | | | |
| 5130 | 1/2 | 0 | In | | | mm | 105,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 | | 0,56 | | |
| | | | | | | | | | | | ASTM A 193 B7/A194 2H Galvanized | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 9,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | |

| | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|------|
| M Erection | | | | | | | | | | | | Total Kg: | 31,1 |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|------|

| | | | | | | | | | | | |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|--|------|
| SX1 | SULPHUREX GH/F | | 33132 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 31,1 |
|-----|----------------|--|-----------|--|-----|-----|-------|--|-----------|--|------|

| | | | | | | | | | |
|---------|------------------|--------------------|--|--------------|-------|--|-----------------------|---------------------|--|
| KV_33.1 | Plant | SX1 SULPHUREX GH/F | | Piping Class | 215 | | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line | 33132 - 0 | | Fluid | | | System | | |
| | Dang. fluid type | | | Coating | | | De pres | | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | | Isometric code | | |
| | Zones | | | | | | Op tem | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|-----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----|--|-------|--|-----------|-----------|-------------|--|----------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.47.57 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | | | | | | 10,33 | | | | | | | |
| 1247 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | | | | | | 0,31 | | | | | | | |
| 4390 | 1/2 | 1/4 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | | | | | | 0,03 | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 10,67 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33133 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 10,67 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | 33133 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|-----------|----------|-------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.58 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 16,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 20,66 | | | | | | | | | | | | |
| 6020 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | "Y" Valve Globe ST.46347/2 FLG 150 LB RF (125÷250 AARH) Forged ASTM A 182 GR. F304 D 75 | 5125 | 3,27 | | | | | | | | | | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 0,80 | | | | | | | | | | | | |
| 4645 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,29 | | | | | | | | | | | | |
| 1049 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,12 | | | | | | | | | | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,17 | | | | | | | | | | | | |
| 1247 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | | | | | | | | | | | |
| 5125 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,44 | | | | | | | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 26,53 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33134 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 26,53 | | | | | | | | |

PI_33.12

Plant SX1 SULPHUREX GH/F
Line 33134 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 215
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1408/3
System
De pres
Isometric code

Op tem

Page 1

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | IE35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.47.58 | | | | | | | | | | | DOC: | | IE35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 0,50 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,63 | | | | | | | | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 8,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 136,41 | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | |
| 5026 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5223 | 7,00 | | | | | | | | | | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 22,50 | | | | | | | | | | | |
| 133 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,85 | | | | | | | | | | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 5,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 28,31 | | | | | | | | | | | |
| 5214 | 3/4 | 0 | In | | | mm | 100,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 6,72 | | | | | | | | | | | |
| 5223 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 8,48 | | | | | | | | | | | |
| 669 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 213,21 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33135 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 213,21 | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33135 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|-----------|----|--------|------------------------|-----|------------|--|-----------|-------------|-----------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.47.58 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 6,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 104,31 | | | | | |
| 5026 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5223 | 7,00 | | | | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 22,50 | | | | | |
| 133 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,85 | | | | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 4,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 22,65 | | | | | |
| 5214 | 3/4 | 0 | In | | | mm | 100,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 6,72 | | | | | |
| 5223 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 8,48 | | | | | |
| 669 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 174,52 | | | |
| SX1 | SULPHUREX GH/F | | | | 33136 - 0 | | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 174,52 | | |

| | | | | | | | |
|-----------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| PSV_33.10 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33136 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.58 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 3,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 56,17 | | | | | | | | | | | | | | |
| 5026 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5223 | 7,00 | | | | | | | | | | | | | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 15,00 | | | | | | | | | | | | | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 11,33 | | | | | | | | | | | | | | |
| 5223 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 8,48 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 97,97 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33137 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 97,97 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33137 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|--------|--|-----------|----------|--------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.58 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1457 | 6 | 0 | In | 3,96 | | mm | ,00 | 5,50 | m | 203 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 88,27 | | | | | | | | | | | | | | |
| 5026 | 6 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Butterfly With Gasket ST.46373/5 WAFER 150 LB RF (125÷250 AARH) Cast DUCTILE IRON B 74 | 5223 | 7,00 | | | | | | | | | | | | | | |
| 475 | 6 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5214 | 15,00 | | | | | | | | | | | | | | |
| 133 | 6 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 2,85 | | | | | | | | | | | | | | |
| 301 | 6 | 0 | In | 3,96 | | mm | ,00 | 3,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE E.R.W. ASTM A 234 GR. WPB | | 16,99 | | | | | | | | | | | | | | |
| 5223 | 3/4 | 0 | In | | | mm | 155,00 | 8,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 8,48 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 138,59 | | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33138 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 138,59 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33138 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|------------------|-----------|---------|-------|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.47.58 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1434 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 16,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 26,98 | | | | | | | | | | |
| 2829 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,40 | | | | | | | | | | |
| 1255 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,43 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 27,81 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33139 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 27,81 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33139 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.47.58 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | | | |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|--|----------------|--|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
|------------|----------------|----|----|------|----|-----------|--------|-------|----|------------|--|-----------|-------------|--------|-----------|-------|
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 16,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 40,04 | | | |
| 2830 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,60 | | | |
| 156 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,07 | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 9,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,22 | | | |
| 1256 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,65 | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 42,57 | | |
| SX1 | SULPHUREX GH/F | | | | | 33140 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 42,57 |

| | | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|--|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 | |
| | Line | 33140 - 0 | Fluid | | System | | |
| | Dang. fluid type | | Coating | | De pres | Op tem | |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|-------|------------|--|-------------|-----------|-------------|-----|-----------|--------|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.47.59 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 15,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | 37,53 | | | | | |
| 2830 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | | | 0,60 | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 9,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | | | | | | 1,22 | | | | | |
| 1256 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | | | | | | 0,65 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 40, | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33141 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 40, | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33141 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|--------|-----------|--|-------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.59 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 14,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 35,03 | | | | | | | | | | | | | | |
| 2830 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,60 | | | | | | | | | | | | | | |
| 156 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,07 | | | | | | | | | | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 8,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 1,08 | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 36,78 | | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33142 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 36,78 | | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33142 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----|-------|--|--|-----------|-----------|----------|-------|-------------|-----------|-------------|--|-----------|--------|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.59 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 14,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | | | | 35,03 | | | | | |
| 2830 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | | | | | | | 0,60 | | | | | |
| 156 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 203 | 45° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | | | | | | | | | | 0,07 | | | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 8,00 | NR | 203 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | | | | | | | | | | 1,08 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 36,78 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33143 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 36,78 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33143 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----|--|-------|----------|-----------|-------------|-----------|-------------|-------|-----------|--------|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.59 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | | 10,13 | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | | | | 0,30 | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | | | | | | | 5191 | 0,40 | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | | | | | | | 0,44 | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 11,27 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33144 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 11,27 | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33144 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.47.59 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,59 | | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | | |
| 4879 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Sight Glass ST.46352/2 FLG 150 LB RF (125÷250 AARH) Forged or cast ASTM A 105 or ASTM A 216 WCB FG 61 | 5191 | 3,00 | | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 1,20 | | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 12,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 1,32 | | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 13,81 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33145 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 13,81 | | | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33145 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|--------|------------------|--|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.59 | | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,59 | | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 8,27 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33146 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 8,27 | | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33146 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|------------------|--------|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.47.59 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 3,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 3,80 | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 4,88 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33147 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 4,88 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33147 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|------------------|-----------|---------|-------|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.47.59 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 10,13 | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 11,21 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33148 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 11,21 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33148 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|------------------|-----------|---------|-------|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.47.59 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 9,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,39 | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 12,07 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33149 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 12,07 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33149 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|---|-----------|-------------|------------------|-----------|---------|-------|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.48.00 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 10,13 | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 11,21 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33150 - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 11,21 | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33150 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|-----|------------|--|-----------|-------------|------------------|--------|---------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.48.00 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 8,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 10,13 | | | | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 10,81 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33151 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 10,81 | | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33151 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|---------------------|--------|-----------|--|------------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | |
| PUMA5 | | | 13/04/2010 11.48.00 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 9,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 11,39 | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 12,07 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33152 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 12,07 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33152 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|-----------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|-----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.48.00 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 10,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 12,66 | | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,76 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 14,4 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | 33153 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 14,4 | | | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33153 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|---------------------|------------------------|----|------|----------------|-----------|--------|------|----|------------|---|-----------|-------------|-----------|--------|------------|
| PUMA5 | 13/04/2010 11.48.00 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | SULPHUREX GH/F | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,59 | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 9,51 | | |
| SX1 | SULPHUREX GH/F | | | | | 33154 - 0 | | | | | SX1 SX1 | 1 / 1 | | TOTAL Kg: | | 9,51 |

| | | | | | | |
|------|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| 33Y5 | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33154 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|--|-----------|-------------|----------|--------|-------------|-----------|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.48.00 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 7,59 | | | | | | | | | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,70 | | | | | | | | | | |
| 465 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 203 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5191 | 0,80 | | | | | | | | | | |
| 1289 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Union TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,38 | | | | | | | | | | |
| 5191 | 1/2 | 0 | In | | | mm | 65,00 | 4,00 | NR | 203 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | | | | | | | | | |
| 659 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 9,91 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33155 - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | 9,91 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33155 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|-----|--|--|--|----------|-----------|---------|-------|-------------|-----------|-------------|--|----------|--------|------------|--|
| PUMA5 | | | | 13/04/2010 11.48.00 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 10,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | | | | | | 12,66 | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | | | | | | | 0,30 | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 5,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | | | | | 2,00 | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 14,96 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33156 - 0 | | | | SX1 | SX1 | | | | 1 / 1 | | | | TOTAL Kg: | | 14,96 | | | | | |

| | | | | | | | |
|------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| 33Y3 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 33156 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|-----------|------------------------|----|------------|---|--|-----|--|-----|--|-----------|----------|-------|-------------|-----------|-------------|-------|-----------|--------|------------|--|
| PUMA5 | | | | 13/04/2010 11.48.01 | | | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1493 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 12,00 | m | 202 | Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized | | | | | | | | | | | 15,19 | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 202 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | | | | | | | 0,30 | | | | | |
| 252 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 202 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized | | | | | | | | | | | 1,60 | | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 17,09 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33157 - 0 | | | | | | SX1 | | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 17,09 | | | | |

| | | | | | | | |
|------|------------------|-----------|----------------|--------------|-------|-----------------------|--------|
| 33Y4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 202 | Welding specification | |
| | Line | 33157 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|-----------|--------|------------------------|----|------------|--|-----------|---------------------|--------|-----------|--|------------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | |
| PUMA5 | | | 13/04/2010 11.48.01 | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | Size: In Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 12,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 15,19 | | | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,30 | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 15,49 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | 33158 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 15,49 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33158 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|------|----|----|-----------|------------------------|----|------------|--|-----|--|------------------|--|-----------|-----------|-------------|--|-----------|--------|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.48.01 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 14,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | | | | | | 17,72 | | | | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | | | | | | 0,30 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 18,02 | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | 33159 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 18,02 | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | 33159 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | SKETCHES MATERIAL LIST | | | | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|---------------------|------------------------|----|------|-------------|----|--------|----------------|-----|------------|--|-----------|-------------|----------|-----------|------------|
| PUMA5 | 13/04/2010 11.48.01 | | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 12,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 15,19 | | | |
| 1434 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 20,00 | m | 205 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 33,73 | | | |
| 3107 | 1/2 | 0 | In | | | mm | ,00 | 7,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 11,90 | | | |
| 3108 | 3/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Valve Gate ST.46270/3 SW-F 800# Forged ASTM A 105 G 61 | | 4,20 | | | |
| 4942 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Steam Trap ST.46212/3 SW-F 300 LB Forged ASTM A 105 T 66 | | 1,60 | | | |
| 231 | 1/2 | 0 | In | | | mm | ,00 | 4,00 | NR | 205 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 1,60 | | | |
| 232 | 3/4 | 0 | In | | | mm | ,00 | 8,00 | NR | 205 | 90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 5,04 | | | |
| 324 | 1 | 0 | In | 3,38 | | mm | ,00 | 4,00 | NR | 205 | 90° Elbow Long Radius ASME B16.9 BE Wrought S ASTM A 234 GR. WPB | | 0,54 | | | |
| 2797 | 3/4 | 1/2 | In | | | mm | ,00 | 4,00 | NR | 205 | Tee Reducing TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 1,48 | | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,28 | | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,12 | | | |
| 4547 | 3/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 205 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 0,38 | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | 76,06 | | |
| SX1 | SULPHUREX GH/F | | | | TRAC VB - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 76,06 | | |

TUBO IN RAME DIA.E. 12mm Thk 1 mt=15
RACCORDI SERTO SO 1221-12-1/2" Nr= 6
RACCORDI SERTO SO 1021-120 Nr= 5

Plant SX1 SULPHUREX GH/F
Line TRAC VB - 0
Dang. fluid type
Area SX1
Zones

Piping Class 205
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1407/2
System
De pres
Isometric code

Op tem
Page 1

| Ballestra | | SKETCHES MATERIAL LIST | | | | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|---------------------|------------------------|----------------|------|-----|----|--------|--------|----------|------------|---|-------------|-------------|--------|------------|
| PUMA5 | 13/04/2010 11.48.01 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm | | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
| 1433 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 130,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 164,55 | | |
| 1434 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 10,00 | m | 203 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 16,87 | | |
| 2828 | 1/2 | 0 | In | | | mm | ,00 | 13,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 3,90 | | |
| 2829 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,40 | | |
| 3116 | 1/2 | 0 | In | | | mm | ,00 | 13,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 9,10 | | |
| 3117 | 3/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Globe ST.46004/3 THRD-F NPT 200 LB Forged BRONZE D 51 | | 0,80 | | |
| 4687 | 1/2 | 0 | In | | | mm | ,00 | 12,00 | NR | 203 | Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 3,36 | | |
| 4398 | 1/2 | 1/4 | In | | | mm | ,00 | 34,00 | NR | 203 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | 1,02 | | |
| 4449 | 3/4 | 1/2 | In | | | mm | ,00 | 6,00 | NR | 205 | Coupling Reducing TA 50.6/1 SW-F 3000# Forged ASTM A 105 | | 0,18 | | |
| M Erection | | | | | | | | | | | | Total Kg: | 200,17 | | |
| SX1 | SULPHUREX GH/F | | TRAC WH - 0 | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 200,17 | | |

| | | | | | | | |
|--|------------------|------|----------------|--------------|-------|-----------------------|---------------------|
| TUBO IN RAME DIA.E. 10mm Thk 1 mt=435 TUBO IN RAME DIA.E. 16mm Thk 1 mt=130 RACCORDI INTERM. ERMETO ID10 A Nr= 146 RACCORDI INTERM. ERMETO ID16 A Nr= 44 RACCORDI ERMETO ED10-1/4" A Nr=34 RACCORDI ERMETO EDS/16 A Nr=10 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | TRAC | WH - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | |
| | Zones | | | | | | Page 1 |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|---------------|----|--------|------------------------|-----|------------|--|-----------|-------------|-----------|----------|-------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.48.01 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 5608 | 16 | 0 | In | 4,78 | | mm | ,00 | 0,20 | m | 209 | Pipe ASME B36.10 PL E.R.W. API 5L GR. B | | 9,47 | | | | | | | | | | | |
| 594 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Flange Slip-On AWWA C207-TAB.1 CL.B 86 psi FF (125÷250 AARH) Forged ASTM A 105 | 5211 | 19,00 | | | | | | | | | | | |
| 5211 | 3/4 | 0 | In | | | mm | 85,00 | 16,00 | NR | 209 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 12,48 | | | | | | | | | | | |
| 801 | 16 | 0 | In | | | mm | ,00 | 1,00 | NR | 209 | Gasket TA 50.5/31 86 psi FF (125÷250 AARH) _ B15D FLAT | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 40,95 | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | VEST.11V1 - 0 | | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 40,95 | | | | | | | | |

| | | | | | | | |
|--|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 209 | Welding specification | SP.1406/2-SP.1407/2 |
| | Line | VEST.11V1 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.48.01 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------------|-----|----|----|------|----|----|--------|------|----|------------|---|-----------|-------------|--------|--------|
| 1435 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,20 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 0,50 | | |
| 2830 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged BRASS NICKEL PLATED S 87 | | 0,60 | | |
| 467 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Flange Slip-On ASME B16.5 150 LB RF (125÷250 AARH) Forged ASTM A 105 | 5192 | 0,80 | | |
| 5192 | 1/2 | 0 | In | | | mm | 70,00 | 4,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 0,44 | | |
| 661 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | 2,34 | | |

| | | | | | | | | | | |
|-----|----------------|--|---------------|--|-----|-----|-------|--|-----------|------|
| SX1 | SULPHUREX GH/F | | VEST.11V2 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | 2,34 |
|-----|----------------|--|---------------|--|-----|-----|-------|--|-----------|------|

| | | | | | | | |
|--|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | VEST.11V2 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | |
|-----------|---------------------|------------------------|-------|-------------|------|---|------------|
| Ballestra | | SKETCHES MATERIAL LIST | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
| PUMA5 | 13/04/2010 11.48.01 | | DOC: | 1E35-65-029 | | | |

| | | | | | | | | | | |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|
| Ballestra | | | SULPHUREX GH/F | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
|-----------|--|--|----------------|--|--|----------|---------|----------|-----------|----------|

| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch |
|------|-----|-----|----|------|------|----|--------|-------|----|------------|---|-----------|-------------|--------|--------|
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 37,00 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 47,79 | | |
| 1505 | 3/4 | 0 | In | 2,87 | | mm | ,00 | 1,60 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 2,75 | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 10,00 | NR | 215 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | 2,04 | | |
| 1762 | 3/4 | 1/2 | In | 2,87 | 2,77 | mm | ,00 | 10,00 | NR | 215 | Reducer Concentric ASME B16.9 BE Wrought S ASTM A 403 GR. WP304 | | 0,59 | | |
| 3 | 1/2 | 0 | In | | | mm | ,00 | 10,00 | NR | 215 | Cross Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 2,86 | | |
| 1156 | 1/2 | 0 | In | | | mm | ,00 | 10,00 | NR | 215 | Coupling Half TA 50.6/1 SW-F 3000# Forged ASTM A 182 GR. F304 | | 1,53 | | |
| 1180 | 1/2 | 0 | In | | | mm | ,00 | 10,00 | NR | 215 | Plug Hex. TA 50.7/2 THRD-M NPT 3000# Forged ASTM A 182 GR. F304 | | 1,33 | | |
| 4390 | 1/2 | 1/4 | In | | | mm | ,00 | 10,00 | NR | 215 | Coupling Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,31 | | |

| | | | | | | | | | | | | | |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|-------|
| M Erection | | | | | | | | | | | | Total Kg: | 59,19 |
|------------|--|--|--|--|--|--|--|--|--|--|--|-----------|-------|

| | | | | | | | | | | | |
|-----|----------------|--|---------------|--|-----|-----|-------|--|-----------|--|-------|
| SX1 | SULPHUREX GH/F | | VEST.12C1 - 0 | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 59,19 |
|-----|----------------|--|---------------|--|-----|-----|-------|--|-----------|--|-------|

| | | | | | | | |
|--|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.12C1 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|---------------|----|--------|------------------------|-----|------------|--|-----------|-------------|------------|--------|-------------|--|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | | 13/04/2010 11.48.02 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 1438 | 2 | 0 | In | 3,91 | | mm | ,00 | 0,20 | m | 206 | Pipe ASME B36.10 PL Seamless API 5L GR. B | | 1,09 | | | | | | | | | | |
| 3113 | 2 | 0 | In | | | mm | ,00 | 1,00 | NR | 211 | Valve Gate ST.46329/1 THRD-F GAS UNI 339 PN 10 Cast BRONZE GUNMETAL | | 3,45 | | | | | | | | | | |
| 5249 | 1 | 0 | In | | | mm | 135,00 | 12,00 | NR | 206 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/ASTM A 194 GR.2H | | 20,64 | | | | | | | | | | |
| 673 | 14 | 0 | In | | | mm | ,00 | 1,00 | NR | 206 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 25,18 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | VEST.12H1 - 0 | | | | SX1 | SX1 | 1 / 1 | | | TOTAL Kg: | | 25,18 | | | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 206 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | VEST.12H1 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----------------|----|------------------------|------|-----|------------|--|--|--|------------------|-----------|---------|-----|------------|-------------|-----------|--------|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.48.02 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | | | | | | | 0,20 | | | | |
| M Erection | | | | | | | | | | | | | | | Total Kg: | | 0,2 | | | | | | |
| SX1 | SULPHUREX GH/F | | | | VEST.16F4A - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 0,2 | | | | | | |

| | | | | | | | |
|--|------------------|----------------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.16F4A - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----------------|----|------------------------|------|-----|------------|--|--|--|----------|-----------|-------------|-----------|-------------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.48.02 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | | | | | | 0,20 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 0,2 | | | | | |
| SX1 | SULPHUREX GH/F | | | | VEST.16F4B - 0 | | | | SX1 | SX1 | 1 / 1 | | | | TOTAL Kg: | | 0,2 | | | | | | |

| | | | | | | | |
|--|------------------|----------------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.16F4B - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
|------------|----------------|----|----|---------------------|---------------|----|--------|------------------------|-----|------------|---|-----------|-------------|--------|----------|--|-------------|--|----------|--|-----------|------------|----------|--|
| PUMA5 | | | | 13/04/2010 11.48.02 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | |
| 1502 | 1/4 | 0 | In | 2,24 | | mm | ,00 | 1,60 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,03 | | | | | | | | | | | |
| 1504 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 2,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 3,23 | | | | | | | | | | | |
| 2853 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 4,90 | | | | | | | | | | | |
| 2860 | 1/4 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 1,84 | | | | | | | | | | | |
| 446 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5127 | 2,40 | | | | | | | | | | | |
| 1207 | 1/2 | 0 | In | 2,77 | | mm | ,00 | 6,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,51 | | | | | | | | | | | |
| 4539 | 1/2 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,37 | | | | | | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,44 | | | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 6,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 48,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 3,84 | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 19,55 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | VEST.16R1 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 19,55 | | | | | | | | | |

| | | | | | | | |
|--|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.16R1 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|---------------|----|--------|------------------------|-----|------------|--|-----------|-------------|--------|--------|----------|--|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.48.02 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 1534 | 14 | 0 | In | 3,96 | | mm | ,00 | 0,20 | m | 215 | Pipe ASME B36.19 PL E.R.W. ASTM A 312 TP 304 | | 7,01 | | | | | | | | | | | | |
| 460 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5168 | 84,00 | | | | | | | | | | | | |
| 346 | 14 | 0 | In | 3,96 | | mm | ,00 | 1,00 | NR | 215 | 90° Elbow Long Radius ASME B16.9 BE Wrought W ASTM A 403 GR. WP304 | | 28,85 | | | | | | | | | | | | |
| 1117 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Coupling Half TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 182 GR. F304 | | 0,06 | | | | | | | | | | | | |
| 1227 | 14 | 0 | In | 3,96 | | mm | ,00 | 2,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought W ASTM A 403 GR. WP304 Type A | | 13,01 | | | | | | | | | | | | |
| 5168 | 1 | 0 | In | | | mm | 155,00 | 18,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 33,12 | | | | | | | | | | | | |
| 724 | 14 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 166,05 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | VEST.16S1 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 166,05 | | | | | | | | | | |

| | | | | | | | |
|---------|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| PI_16.5 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.16S1 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | PROJ: | 1E35 | REV: | 0 | 13/04/2010 |
|------------|----------------|----|---------------------|------|---------------|----|------------------------|-------|-----|------------|--|-----------|-------------|-------------|----------|-----------|------------|
| PUMA5 | | | 13/04/2010 11.48.02 | | | | | | | | | | DOC: | 1E35-65-029 | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | Size: In | Thk: mm | Temp: °C | Pres: BAR | Corr: mm |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 1506 | 1 | 0 | In | 3,38 | | mm | ,00 | 0,50 | m | 215 | Pipe ASME B36.19 PL Seamless ASTM A 312 TP 304 | | 1,28 | | | | |
| 2864 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46545/1 THRD-F NPT 800# Forged ASTM A 182 GR. F316 S 99 | | 1,43 | | | | |
| 448 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Flange Lap-Joint ASME B16.5 150 LB Flat Face Smooth Forged ASTM A 105 Galvanized | 5128 | 0,80 | | | | |
| 1209 | 1 | 0 | In | 3,38 | | mm | ,00 | 1,00 | NR | 215 | Stub-End MSS SP-43 FLG x BE Wrought S ASTM A 403 GR. WP304 Type A | | 0,16 | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 12,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,44 | | | | |
| 5128 | 1/2 | 0 | In | | | mm | 80,00 | 4,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | |
| 711 | 3/4 | 0 | In | | | mm | ,00 | 3,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | |
| 712 | 1 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 5,59 | | | |
| SX1 | SULPHUREX GH/F | | | | VEST.16V5 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 5,59 | | |

| | | | | | | | |
|---------|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| LG_16.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.16V5 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|---------------|------------------------|------|----|------------|---|-----------|-------------|------------------|-----------|---------|------|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.48.02 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,92 | | | | | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 1,92 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | VEST.33A1 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 1,92 | | | | | | |

| | | | | | | | |
|---------------------------------|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| TL_33.6 LSL_33.6 LSH_33.6 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.33A1 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|----|------------------------|------|----|------------|---|-----------|-------------|------------------|-----------|---------|------|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.48.02 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 5137 | 5/8 | 0 | In | | | mm | 105,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,92 | | | | | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 1,92 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | VEST.33A2 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 1,92 | | | | | | |

| | | | | | | | |
|---------------------------------|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| TI_33.7 LSL_33.7 LSH_33.7 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.33A2 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|----|------------------------|------|----|------------|--|--|-----|----------|-----|-------------|-----------|-----------|-------------|-----------|--------|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.48.03 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | |
| 4546 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 | | | | | | | | 0,12 | | | | |
| M Erection | | | | | | | | | | | | | | | | | Total Kg: | | 0,12 | | | | |
| SX1 | SULPHUREX GH/F | | | | | | VEST.33D1 - 0 | | | | | | SX1 | | SX1 | | 1 / 1 | | TOTAL Kg: | | 0,12 | | |

| | | | | | | | |
|--|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | VEST.33D1 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|----|----|------------------------|------|----|------------|---|-----------|-------------|------------------|-----------|---------|------|------------|--|-----------|--|----------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: 1E35 | | REV: 0 | | 13/04/2010 | | | | | |
| PUMA5 | | | 13/04/2010 11.48.03 | | | | | | | | | | | DOC: 1E35-65-029 | | | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 5142 | 5/8 | 0 | In | | | mm | 135,00 | 8,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 2,24 | | | | | | | | | | |
| 717 | 3 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 2,24 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | VEST.33E1 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 2,24 | | | | | | |

| | | | | | | | |
|----------------------------------|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| TL_33.10 LSL_33.2 LSH_33.2 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 216 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.33E1 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|---------------|----|------------------------|------|-----|------------|--|-------|--|----------|--|-------------|-----------|-------------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.48.03 | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | | | | | | 0,20 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 0,2 | | | | | |
| SX1 | SULPHUREX GH/F | | | | VEST.33F1 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 0,2 | | | | | |

| | | | | | | | |
|--|------------------|-----------|----------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.33F1 | - 0 | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|---------------------|----|---------------|----|------------------------|------|-----|------------|--|-------|--|----------|--|-------------|-----------|-------------|--------|-----------|--|------------|--|
| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | 13/04/2010 11.48.03 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | |
| 3155 | 1/4 | 0 | In | | | mm | ,00 | 1,00 | NR | 203 | Valve Plug ST.46019/1 THRD-F NPT PN 16 Forged ASTM A 182 GR. F316 M 53 | | | | | | | 0,20 | | | | | |
| M Erection | | | | | | | | | | | | | | | | Total Kg: | | 0,2 | | | | | |
| SX1 | SULPHUREX GH/F | | | | VEST.33F2 - 0 | | | | SX1 | SX1 | | 1 / 1 | | | | TOTAL Kg: | | 0,2 | | | | | |

| | | | | | | |
|--|------------------|--------------------|--------------|-------|-----------------------|---------------------|
| | Plant | SX1 SULPHUREX GH/F | Piping Class | 203 | Welding specification | SP.1406/2-SP.1407/3 |
| | Line | VEST.33F2 - 0 | Fluid | | System | |
| | Dang. fluid type | | Coating | | De pres | Op tem |
| | Area | SX1 | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | |

| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|----|---------------------|----|----|---------------|------------------------|----|------------|---|-----------|-------------|--------|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| PUMA5 | | | | 13/04/2010 11.48.03 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 2853 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 1,63 | | | | | | | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 2,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,24 | | | | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 3,15 | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | VEST.33V1 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 3,15 | | | | | | | | |

| | | | | | | | |
|---------|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|
| TL_33.1 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 |
| | Line | VEST.33V1 - 0 | | Fluid | | System | |
| | Dang. fluid type | | | Coating | | De pres | Op tem |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 |
| | Zones | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|---------------|--------|------------------------|----|------------|---|-----|-------|--|-----------|-----------|-------------|-----------|----------|--------|-----------|------------|----------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | 13/04/2010 | | |
| PUMA5 | | | | 13/04/2010 11.48.03 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | | | | | Gen. Bolt | Weight (Kg) | | As.bly | Branch | | | | |
| 2867 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Valve Ball Full Port ST.46588/2 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 125 | | | | | 5381 | 1,63 | | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 2,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | | | | | 0,24 | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 2,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 216 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | | | | | 1,28 | | | | | | | |
| M Erection | | | | | | | | | | | | | | | Total Kg: | | 3,15 | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | VEST.33V3 - 0 | | | | | SX1 | SX1 | 1 / 1 | | | | | TOTAL Kg: | | 3,15 | | | | |

TL_33.3
LSL_33.3
LSH_33.3

Plant SX1 SULPHUREX GH/F
Line VEST.33V3 - 0
Dang. fluid type
Area SX1
Zones

Piping Class 216
Fluid
Coating
Sketch Sht 1 / 1

Welding specification SP.1406/2-SP.1408/3
System
De pres
Isometric code

Op tem

Page 1

| Ballestra | | | | | | | SKETCHES MATERIAL LIST | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
|------------|----------------|----|---------------------|----|----|---------------|------------------------|-------|----|------------|---|-----------|-------------|----------|-----------|-------------|------|----------|--|-----------|--|------------|--|
| PUMA5 | | | 13/04/2010 11.48.03 | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | SULPHUREX GH/F | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | |
| 2853 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Valve Ball Full Port ST.46586/3 LUG 150 LB RF (125÷250 AARH) Cast ASTM A 351 CF8 S 123 | 5381 | 1,63 | | | | | | | | | | |
| 5130 | 1/2 | 0 | In | | | mm | 105,00 | 8,00 | NR | 215 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 1,12 | | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 711 | 3/4 | 0 | In | | | mm | ,00 | 2,00 | NR | 215 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | |
| 5381 | 1/2 | 0 | In | | | mm | 30,00 | 16,00 | NR | 215 | Screws for valves ASME B 18.2.1 /UNC ASTM A 193 B7 Galvanized | | 1,28 | | | | | | | | | | |
| M Erection | | | | | | | | | | | | | Total Kg: | | 4,03 | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | VEST.33V4 - 0 | | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 4,03 | | | | | | |

| | | | | | | | | |
|---------------------|------------------|---------------|----------------|--------------|-------|-----------------------|---------------------|--|
| LG_33.4 LSL_33.4 | Plant | SX1 | SULPHUREX GH/F | Piping Class | 215 | Welding specification | SP.1406/2-SP.1408/3 | |
| | Line | VEST.33V4 - 0 | | Fluid | | System | | |
| | Dang. fluid type | | | Coating | | De pres | Op tem | |
| | Area | SX1 | | Sketch Sht | 1 / 1 | Isometric code | Page 1 | |
| | Zones | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|---------------------|----|----|---------------|------------------------|----|------------|---|-----------|-------------|--------|-----------|----------|------|-------------|--|----------|--|-----------|--|------------|--|
| Ballestra | | | | | | | | SKETCHES MATERIAL LIST | | | | | | | | PROJ: | | 1E35 | | REV: | | 0 | | 13/04/2010 | |
| PUMA5 | | | | 13/04/2010 11.48.03 | | | | | | | | | | | | DOC: | | 1E35-65-029 | | | | | | | |
| Ballestra | | | | | | | | SULPHUREX GH/F | | | | | | | | Size: In | | Thk: mm | | Temp: °C | | Pres: BAR | | Corr: mm | |
| Mark | S1 | S2 | | T1 | T2 | | Len mm | Qty | Um | Pip. class | Component | Gen. Bolt | Weight (Kg) | As.bly | Branch | | | | | | | | | | |
| 5086 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Flange Blind + Disk ASME B16.5 - TA 50.63/3 (DISK) 150 LB RF (125÷250 AARH) Forged FLG: ASTM A 105 Galvanized - DISK: A240 TYPE 316 | 5127 | 0,44 | | | | | | | | | | | | |
| 5127 | 1/2 | 0 | In | | | mm | 75,00 | 4,00 | NR | 216 | Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9 ASTM A 193 B7/A194 2H Galvanized | | 0,48 | | | | | | | | | | | | |
| 710 | 1/2 | 0 | In | | | mm | ,00 | 1,00 | NR | 216 | Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5F | | | | | | | | | | | | | | |
| M Erection | | | | | | | | | | | | Total Kg: | | 0,92 | | | | | | | | | | | |
| SX1 | SULPHUREX GH/F | | | | | | VEST.33V5 - 0 | | | | SX1 | SX1 | 1 / 1 | | TOTAL Kg: | | 0,92 | | | | | | | | |

| | | | |
|----------|--------------------------|------------------|---|
| TL_33.5 | Plant SX1 SULPHUREX GH/F | Piping Class 216 | Welding specification SP.1406/2-SP.1408/3 |
| LSL_33.5 | Line VEST.33V5 - 0 | Fluid | System |
| | Dang. fluid type | Coating | De pres |
| | Area SX1 | Sketch Sht 1 / 1 | Op tem |
| | Zones | Isometric code | Page 1 |