		Ba	llest	ra					S	KETCH	IES MATERIAL LIST		PROJ:	1E35		REV: 0	13/04/201
	PUMA	A 5		13/04/2	010 11.07	.00							DOC:	1E35-	65-024	_	
			Bal	lestra						SU	LPHUREX GH/F	Size: In T	nk: mm	Temp:	°C	Pres: BAR	Corr: mm
Mark	S1	S2		T1	T2		Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg) As	bly Branch
1498	2	0	In	3,91		mm	,00	30,00	m	202	Pipe ASME B36.10 THRD-M NPT Sear	mless API 5L	GR. B			163,11	
				'							Galvanized					•	
2775	2	1	In			mm	,00	7,00	NR	202	Tee Reducing TA 50.7/2 THRD-F NPT	3000# Forge	d ASTM A	105		12,60	
											Galvanized					•	
2777	2	1+1/2	In			mm	,00	2,00	NR	202	Tee Reducing TA 50.7/2 THRD-F NPT	3000# Forge	d ASTM A	105		3,60	
				'							Galvanized					·	'
976	1	1/2	In			mm	,00	7,00	NR	202	Reducing Insert M/F TA 50.7/2 THRD-N	M NPT x TH	RD-F 3000	Э#		1,33	
	-						_		_	1	Forged ASTM A 105 Galvanized			-			1
4572	2	0	In			mm	,00	1,00	NR	202	Cap TA 50.7/2 THRD-F NPT 3000# For	rged ASTM	A 105 Galv	anized		1,60	
			,			*				N	1 Erection			,	Total Kg:	182,24	

TOTAL Kg:

182,24

SX1

SX3

SLS - SECT. 77 - UTIL

01160 - 0

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 202 Welding specification
Line 01160 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1
Zones

Ball	estra	SKETCHES MATERIAL LIST	PROJ:	1E35	REV: 0	13/04/2010
PUMA5	13/04/2010 11.07.00		DOC:	1E35-65-024		
	Ballestra	SULPHUREX GH/F	Size: In Thk: mm	Temp: °C	Pres: BAR	Corr: mm

Mark	S1	S2		T1	T2	Len mm	Qty	Um	Pip. class	Component	Gen. Bolt	Weight (Kg) As.bly	Branch
1497	1+1/2	0	In	3,68	mm	,00	46,00	m	202	Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized		186,26	
256	1+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		4,80	
2770	1+1/2	1/2	In		mm	,00	5,00	NR	202	Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized		6,40	
2772	1+1/2	1	In		mm	,00	1,00	NR	202	Tee Reducing TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized		1,28	
4677	1+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		1,28	
4571	1+1/2	0	In		mm	,00	2,00	NR	202	Cap TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized		1,50	
	'	1	,	1					N	M Erection	Total Kg:	201,52	
SX3	SLS - SE	CT. 77	- UTIL		01161	- 0			SX1	1/1	TOTAL Kg:	201,52	

Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specification	n
Line 01161 - 0	Fluid	System	
Dang. fluid type	Coating	De pres	Op tem
Area	Sketch Sht 1/1	Isometric code	Page 1
Zones			

		В	allestr	a					S	KETCH	IES MATERIAL LIST		PROJ:	1E35		REV:	0 1	3/04/2010
	PUMA	.5		13/04/20	010 11.07	7.01							DOC:	1E35	-65-024		•	
			Ball	estra						SU	LPHUREX GH/F	Size: In	Thk: mm	Temp:	°C	Pres: BAR		Corr: mm
Mark								Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg	g) As.bly	Branch
1495							,00	30,00	m	202	Pipe ASME B36.10 THRD-M NPT Sea Galvanized	mless API 5	SL GR. B			75,0	7	
2765	1 1/2 In mm						,00	1,00	NR	202	Tee Reducing TA 50.7/2 THRD-F NPT Galvanized	3000# Forg	ged ASTM A	105		0,5°	7	
4675	1 0 In mm							1,00	NR	202	Tee Straight TA 50.7/2 THRD-F NPT 3 Galvanized	000# Forge	d ASTM A	105		0,5	7	
4569	1	0	In			mm	,00	1,00	NR	202	Cap TA 50.7/2 THRD-F NPT 3000# Fo	rged ASTM	I A 105 Gal	vanized		0,2:	5	
										N	1 Erection				Total Kg:	76,4	6	

TOTAL Kg:

76,46

SX1

SLS - SECT. 77 - UTIL

SX3

01169 - 0

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 202 Welding specification
Line 01169 - 0 Fluid System

Dang, fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1

Zones

		В	allestr	a					S	KETCH	IES MATERIAL LIST		PROJ:	1E35		REV:	0 1	3/04/2010
	PUMA	.5		13/04/20	010 11.07	7.01							DOC:	1E35-65-02	24			
			Ball	lestra						SU	LPHUREX GH/F	Size: In The	: mm	Temp: °C		Pres: BAR		Corr: mm
Mark	S1 S2 T1 T2 mm							Qty	Um	Pip. class	Component			Gen.	Bolt	Weight (Kg	g) As.bly	Branch
1495							,00	25,00	m	202	Pipe ASME B36.10 THRD-M NPT Sea Galvanized	mless API 5L (GR. B			62,55	5	
254	1 0 In mm					,00	2,00	NR	202	90° Elbow TA 50.7/2 THRD-F NPT 30 Galvanized	00# Forged AS	TM A 10	5		2,20	0		
4675	1 0 In mm						,00	1,00	NR	202	Tee Straight TA 50.7/2 THRD-F NPT 3 Galvanized	000# Forged A	STM A 1	05		0,5	7	
4569	1	0	In			mm	,00	1,00	NR	202	Cap TA 50.7/2 THRD-F NPT 3000# Fo	rged ASTM A	105 Galv	anized		0,25	5	
										N	1 Erection			Tota	al Kg:	65,5	7	

TOTAL Kg:

65,57

SX1

SLS - SECT. 77 - UTIL

SX3

01170 - 0

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 202 Welding specification
Line 01170 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1
Zones

		В	allestr	a					S	KETCH	ES MATERIAL LIST		PROJ:	1E35		REV: 0	13	/04/2010
	PUMA5	í		13/04/20	010 11.07	.01							DOC:	1E35	-65-024	•		
			Ball	estra						SUI	LPHUREX GH/F	Size: In	Thk: mm	Temp:	°C	Pres: BAR	C	Corr: mm
Mark	S1 S2 T1 T2 mm							Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg)	As.bly	Branch
1437	1+1/2	0	In	3,68		mm	,00	30,00		205	Pipe ASME B36.10 PL Seamless API 5	L GR. B				121,48	<u> </u>	
403	1+1/2	0	In			mm	,00	1,00	NR	205	Flange Blind ASME B16.5 150 LB RF (ASTM A 105	125÷250 A	ARH) Forge	d	5193	1,60		
469	1+1/2	0	In			mm	,00	1,00	NR	205	Flange Slip-On ASME B16.5 150 LB R ASTM A 105	F (125÷250	AARH) For	ged	5193	1,40		
5193	1/2	0	In			mm	75,00	4,00	NR	205	Stud Bolt + 2 Nuts TA 50.48B/28 ASM ASTM A 193 B7/ASTM A 194 GR.2H	E B18.2.1 U	JNC/2.2 TAI	3.9		0,48		
663	1+1/2	0	In			mm	,00	1,00	NR	205	Gasket TA 50.5/31 150 LB RF (125÷25	0 AARH) _	B5C					
					,	•				N	I Erection				Total Kg:	124,96		

TOTAL Kg:

124,96

SX1

SLS - SECT. 77 - UTIL

SX3

03125 - 0

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 205 Welding specification SP.1406/2-SP.1407/2
Line 03125 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1
Zones

		В	Ballesti	ra					S	KETCH	IES MATERIAL LIST		PROJ	1E35		REV: 0 13	3/04/2010
	PUMA	A 5		13/04/2	010 11.07	.01							DOC:	1E35	-65-024		
			Bal	lestra						SUI	LPHUREX GH/F	Size: In	Thk: mm	Temp	:°C	Pres: BAR	Corr: mm
Mark						Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg) As.bly	Branch	
1435	1	0	In	3,38		mm	,00	25,00	m	205	Pipe ASME B36.10 PL Seamless API 5				62,55		
401	1	0	In			mm	,00	1,00	NR	205	Flange Blind ASME B16.5 150 LB RF (ASTM A 105	ed	5192	0,90			
467	1	0	In			mm	,00	1,00	NR	205	Flange Slip-On ASME B16.5 150 LB R ASTM A 105	F (125÷25)	0 AARH) Foi	ged	5192	0,80	
324	1	0	In	3,38		mm	,00	2,00	NR	205	90° Elbow Long Radius ASME B16.9 E GR. WPB	234		0,27			
5192	1/2	0			mm	70,00	4,00	NR	205	Stud Bolt + 2 Nuts TA 50.48B/28 ASM ASTM A 193 B7/ASTM A 194 GR 2H	E B18.2.1	UNC/2.2 TA	B. 9		0,44		

M Erection

Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C

1 / 1

Total Kg:

TOTAL Kg:

64,97

64,97

,00

mm

03126 - 0

1,00 NR 205

SX1

661

SX3

0

SLS - SECT. 77 - UTIL

 Plant SX3 SLS - SECT. 77 - UTIL
 Piping Class 205
 Welding specification SP.1406/2-SP.1407/2

 Line 03126 - 0
 Fluid
 System

 Dang. fluid type
 Coating
 De pres
 Op tem

 Area
 Sketch Sht 1/1
 Isometric code
 Page 1

 Zones

		В	Ballestr	a					S	SKETCH	ES MATERIAL LIST		PROJ:	1E35		REV: 0	13	3/04/2010
	PUMA5	í		13/04/20	010 11.07	.01							DOC:	1E35	-65-024	•		
			Ball	estra						SUI	PHUREX GH/F	Size: In	Thk: mm	Temp:	°C	Pres: BAR	(Corr: mm
Mark	S1 S2 T1 T2 mm							Qty	Un	Pip. class	Component				Gen. Bolt	Weight (Kg)	As.bly	Branch
1437	1+1/2	0	In	3,68		mm	,00	30,00		203	Pipe ASME B36.10 PL Seamless API 51	GR. B				121,48		
403	1+1/2	0	In			mm	,00	1,00	NR	203	Flange Blind ASME B16.5 150 LB RF (ASTM A 105	125÷250 A	ARH) Forge	d	5193	1,60		
469	1+1/2	0	In			mm	,00	1,00	NR	203	Flange Slip-On ASME B16.5 150 LB R ASTM A 105	F (125÷250	AARH) For	ged	5193	1,40		
5193	1/2	0	In			mm	75,00	4,00	NR	203	Stud Bolt + 2 Nuts TA 50.48B/28 ASM ASTM A 193 B7/ASTM A 194 GR.2H	E B18.2.1 U	JNC/2.2 TAI	3.9		0,48		
663	1+1/2	0	In			mm	,00	1,00	NR	203	Gasket TA 50.5/31 150 LB RF (125÷25)	O AARH) _	B5C					
					,	•				N	I Erection				Total Kg:	124.96		

TOTAL Kg:

124,96

SX1

SLS - SECT. 77 - UTIL

SX3

05115 - 0

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 203 Welding specification SP.1406/2-SP.1407/3
Line 05115 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1
Zones

		В	Ballestr	a					S	SKETCH	ES MATERIAL LIST		PROJ:	1E35		REV: 0	13	3/04/2010
	PUMA5	í		13/04/20	010 11.07	.01							DOC:	1E35	-65-024	•		
			Ball	estra						SUI	PHUREX GH/F	Size: In	Thk: mm	Temp:	°C	Pres: BAR	(Corr: mm
Mark	S1 S2 T1 T2 mm							Qty	Un	Pip. class	Component				Gen. Bolt	Weight (Kg)	As.bly	Branch
1437	1+1/2	0	In	3,68		mm	,00	30,00		203	Pipe ASME B36.10 PL Seamless API 51	GR. B				121,48		
403	1+1/2	0	In			mm	,00	1,00	NR	203	Flange Blind ASME B16.5 150 LB RF (ASTM A 105	125÷250 A	ARH) Forge	d	5193	1,60		
469	1+1/2	0	In			mm	,00	1,00	NR	203	Flange Slip-On ASME B16.5 150 LB R ASTM A 105	F (125÷250	AARH) For	ged	5193	1,40		
5193	1/2	0	In			mm	75,00	4,00	NR	203	Stud Bolt + 2 Nuts TA 50.48B/28 ASM ASTM A 193 B7/ASTM A 194 GR.2H	E B18.2.1 U	JNC/2.2 TAI	3.9		0,48		
663	1+1/2	0	In			mm	,00	1,00	NR	203	Gasket TA 50.5/31 150 LB RF (125÷25)	O AARH) _	B5C					
					,	•				N	I Erection				Total Kg:	124.96		

TOTAL Kg:

124,96

SX1

SLS - SECT. 77 - UTIL

SX3

05116 - 0

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 203 Welding specification SP.1406/2-SP.1407/3

Line 05116 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1

Zones

		В	allestr	a						SK	KETCH	IES MATERIAL LIST		PROJ:	1E35		REV: 0	13/04/2010
	PUMA5			13/04/20	10 11.07	.01								DOC:	1E35	-65-024		
			Ball	estra							SUI	LPHUREX GH/F	Size: In	Thk: mm	Temp	:°C	Pres: BAR	Corr: mm
		1			T									1				
Mark	S1	S2		T1	T2		Len mm	Q	ty [Jm I	Pip. class	Component				Gen. Bolt	Weight (Kg) As.bly	y Branch
1437	1+1/2	0	In	3,68		mm	,00	30,	00	m 2	203	Pipe ASME B36.10 PL Seamless API 5I	L GR. B				121,48	
403	1+1/2	0	In			mm	,00	1,	00	NR 2	203	Flange Blind ASME B16.5 150 LB RF (125÷250 A	ARH) Forge	d	5193	1,60	
		'			'							ASTM A 105						
469	1+1/2	0	In			mm	,00	1,	00	NR 2	203	Flange Slip-On ASME B16.5 150 LB RI	F (125÷250	AARH) For	ged	5193	1,40	
							'	•	_			ASTM A 105				'		'
5193	1/2	0	In			mm	75,00	4,	00	NR 2	203	Stud Bolt + 2 Nuts TA 50.48B/28 ASMI	E B18.2.1 U	JNC/2.2 TAI	3.9		0,48	
		1	1				·					ASTM A 193 B7/ASTM A 194 GR.2H				'		'
663	1+1/2	0	In			mm	,00	1,	00	NR 2	203	Gasket TA 50.5/31 150 LB RF (125÷250	0 AARH) _	B5C				
	-			1	1	1					N	1 Erection				Total Kg:	124,96	

SX1

1 / 1

TOTAL Kg:

124,96

SLS - SECT. 77 - UTIL

SX3

07105 - 0

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 203 Welding specification SP.1406/2-SP.1407/3

Line 07105 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1

Zones

		E	Ballestr	a					S	KETCH	IES MATERIAL LIST		PROJ	1E35	i	REV: 0	13/04/2010
	PUMA	.5		13/04/20	010 11.07	7.02							DOC:	1E35	5-65-024	•	
			Ball	lestra						SUI	LPHUREX GH/F	Size: In	Thk: mm	Temp	:°C	Pres: BAR	Corr: mm
Mark	S1	S2		T1	Т2		Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg) As.bly	Branch
1435	1	0	In	3,38		mm	,00	25,00		203	Pipe ASME B36.10 PL Seamless API 5I	GR. B				62,55	
401	1	0	In			mm	,00	1,00	NR	203	Flange Blind ASME B16.5 150 LB RF (ASTM A 105	125÷250 A	AARH) Forge	ed	5192	0,90	
467	1	0	In			mm	,00	1,00	NR	203	Flange Slip-On ASME B16.5 150 LB RI ASTM A 105	F (125÷250) AARH) For	rged	5192	0,80	
324	1	0	In	3,38		mm	,00	2,00	NR	203	90° Elbow Long Radius ASME B16.9 B GR. WPB	E Wrough	t S ASTM A	234		0,27	
5192	1/2	0	In			mm	70,00	4,00	NR	203	Stud Bolt + 2 Nuts TA 50.48B/28 ASME ASTM A 193 B7/ASTM A 194 GR.2H	E B18.2.1	UNC/2.2 TA	B. 9		0,44	
661	1	0	In			mm	,00	1,00	NR	203	Gasket TA 50.5/31 150 LB RF (125÷250) AARH) _	B5C				
	*	*		•			·			N	1 Erection				Total Kg:	64,97	*

TOTAL Kg:

64,97

SX1

SLS - SECT. 77 - UTIL

07106 - 0

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 203 Welding specification SP.1406/2-SP.1407/3

Line 07106 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1

Zones

		В	allestr	a					S	KETCH	IES MATERIAL LIST		PROJ:	1E35		REV: 0	13.	/04/2010
	PUMA	15		13/04/20	010 11.07	7.02							DOC:	1E35	-65-024	•	•	
			Ball	estra						SU	LPHUREX GH/F	Size: In	Thk: mm	Temp:	: °C	Pres: BAR	C	orr: mm
Mark	S1	S2		T1	T2		Len mn	n 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 5	L GR. B				7,59		
2828	1/2	0	In			mm	,00,	1,00) NR	203	Valve Ball Full Port ST.46330/3 THRD BRASS NICKEL PLATED S 87	-F NPT 200	LB Forged			0,30		
3174	1/2	0	In			mm	,00	1,00	NR	203	Strainer Y-Type ST.46326/4 THRD-F I F 70	NPT 200 LB	Forged BR	ONZE		0,50		
465	1/2	0	In			mm	,00	1,00) NR	203	Flange Slip-On ASME B16.5 150 LB R ASTM A 105	F (125÷250	AARH) For	ged	5191	0,40		
1289	1/2	0	In			mm	,00	2,00	NR	203	Union TA 50.6/1 SW-F 3000# Forged A	ASTM A 105	i			0,76		
5191	1/2	0	In			mm	65,00	4,00	NR	203	Stud Bolt + 2 Nuts TA 50.48B/28 ASM ASTM A 193 B7/ASTM A 194 GR.2H		NC/2.2 TAE	3.9		0,44		
659	1/2	0	In			mm	,00	1,00	NR	203	Gasket TA 50.5/31 150 LB RF (125÷25	0 AARH)_	B5C					
	,		'	•		•				N	M Erection				Total Kg:	9,99		
SX3	SLS - SI	ECT. 77	- UTIL			77101	- 0			SX1	1.	/ 1		7	TOTAL Kg:	9,99		

KY_77.1	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 203	Welding specification	n SP.1406/2-SP.1407/3
	Line 77101 - 0	Fluid	System	
	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

		Bal	lestra						S	KETCH	ES MATERIAL LIST		PROJ:	1E35		REV: 0	13/04/2010
	PUMA:	5		13/04/20	10 11.07.	02							DOC:	1E35-0	65-024		
			Balles	tra						SUI	PHUREX GH/F	Size: In	Thk: mm	Temp:	°C	Pres: BAR	Corr: mm
Mark	S1	S2		T1	Т2		Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg) As.l	oly Branch

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		
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						1 Erection	Total Kg:	1,39					
SX3	SLS - SECT. 77 - UTIL 77102 - 0 SX1				SX1	1/1	TOTAL Kg:	1,39						

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 203 Welding specification SP.1406/2-SP.1407/3
Line 77102 - 0 Fluid System
Dang. fluid type Coating De pres Op tem
Area Sketch Sht 1/1 Isometric code Page 1
Zones

Balle	stra	SKE	TCHES MATERIA	AL LIST		PROJ:	1E35	REV: 0	13/04/2010
PUMA5	13/04/2010 11.07.02					DOC:	1E35-65-024		
	Ballestra		SULPHUREX GH/F		Size: In Th	ık: mm	Temp: °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	
2828	1/2	0	In		mm	,00	1,00	NR	203	Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged		0,30	
		_								BRASS NICKEL PLATED S 87	'	*	

			M Erection		Total Kg:	4,1
SX3	SLS - SECT. 77 - UTIL	77103 - 0	SX1	1/1	TOTAL Kg:	4,1

77Y2	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 203	Welding specification	n SP.1406/2-SP.1407/3
	Line 77103 - 0	Fluid	System	
	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

		Ba	llestr	a					S	KETCH	IES MATERIAL LIST		PRO	I: 1E35		REV: 0	13.	/04/2010
	PUMA	.5		13/04/20	010 11.07	7.02							DOC	: 1E35	-65-024			
			Ball	estra						SU	LPHUREX GH/F	Size: In	Thk: mm	Temp	: °C	Pres: BAR	C	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		_	202	Pipe ASME B36.10 THRD-M NPT Sea Galvanized	mless API	5L GR. B			3,80		
2828	1/2	0	In			mm	,00	1,00	NR	202	Valve Ball Full Port ST.46330/3 THRD BRASS NICKEL PLATED S 87	-F NPT 20	00 LB Forge	d		0,30		
252	1/2	0	In			mm	,00	2,00	NR	202	90° Elbow TA 50.7/2 THRD-F NPT 30 Galvanized	00# Forge	d ASTM A	105		0,80		
										1	M Erection				Total Kg:	4,9		

TOTAL Kg:

4,9

SX1

SLS - SECT. 77 - UTIL

77104 - 0

77Y2	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specification	l
	Line 77104 - 0	Fluid	System	
	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

		Ball	lestra						S	KETCH	ES MATERIAL LIST		PROJ:	1E35		REV: 0	13/04/2010
	PUMA5		3/04/20	10 11.07.	02							DOC:	1E35	-65-024			
	Ballestra									SUI	PHUREX GH/F	Size: In	Thk: mm	Temp	:°C	Pres: BAR	Corr: mm
Mark	S1	S2		Т1	T2		Len mm	Otv	IIm	Pip. class	Component				Gen. Bolt	Weight (Kg) As	s.bly Branch

Mark	S1	S2		T1	T2		Len mm	Qty	Un	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		
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:	5,5					
SX3	SLS - SECT. 77 - UTIL 77105 - 0 SX1		SX1	1/1	TOTAL Kg:	5,5									

77Y2	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 205	Welding specificatio	n SP.1406/2-SP.1407/2
	Line 77105 - 0	Fluid	System	
	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

Balle	estra	SKETCHES MATERIAL LIST		PROJ:	1E35	REV: 0	13/04/2010
PUMA5	13/04/2010 11.07.02			DOC:	1E35-65-024		
	Ballestra	SULPHUREX GH/F	Size: In	Thk: mm	Temp: °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	
2828	1/2	0	In		mm	,00	1,00	NR	203	Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged		0,30	
										BRASS NICKEL PLATED S 87		'	

			M Erection		Total Kg:	4,1
SX3	SLS - SECT. 77 - UTIL	77106 - 0	SX1	1 / 1	TOTAL Kg:	4,1

77Y2	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 203	Welding specification	SP.1406/2-SP.1407/3
	Line 77106 - 0	Fluid	System	
	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

		F	Ballest	ra					5	SKETCH	IES MATERIAL LIST		PROJ:	1E35		REV: 0	13	3/04/2010
	PUMA	.5		13/04/20	010 11.07	.03	1						DOC:	1E35-	65-024	•		
			Ba	llestra						SUI	LPHUREX GH/F	Size: In Thl	K: mm	Temp:	°C	Pres: BAR	(Corr: mm
Mark	S1	S2		T1	T2		Len mm	Qty	Un	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 5	L GR. B				3,80		
1504	1/2	0	In	2,77		mm	,00	1,00	m	226	Pipe ASME B36.19 PL Seamless ASTM	1 A 312 TP 304				1,29		
5397	1/2	0	In			mm	,00	1,00	NR	226	Valve Check SB-ATI-VR134/0 FLG 90 Forged AISI 304 R 174	0 LB LF (125÷	250 AAR	RH)	5145			
3107	1/2	0	In			mm	,00,	1,00	NR	205	Valve Gate ST.46270/3 SW-F 800# For	ged ASTM A 1	05 G 61			1,70		T
5399	1/2	0	In	2,77		mm	,00	2,00	NR	226	Flange Weld Neck ASME B16.5 900 LI Forged ASTM A 182 GR. F304	B LM (125÷250	(AARH)		5145			
263	1/2	0	In			mm	,00	2,00	NR	226	90° Elbow TA 50.6/1 SW-F 3000# Forg	ged ASTM A 18	32 GR. F3	304		0,51		
5145	3/4	0	In			mm	100,00	12,00	NR	226	Stud Bolt + 2 Nuts TA 50.48B/28 ASM ASTM A 193 B7/A194 2H Galvanized	E B18.2.1 UNC	C/2.2 TAE	3.9		10,08		
5394	1/2	0	In			mm	,00	3,00	NR	226	Gasket TA 50.5/31 900 LB LM-LF (125	5÷250 AARH)	B4C FL	.AT				
	'	1								N	/I Erection			1	Total Kg:	17,38		

TOTAL Kg:

17,38

SX1

SLS - SECT. 77 - UTIL

SX3

77107 - 0

Plan	nt SX3 SLS - SECT. 77 - UTIL	Piping Class 226	Welding specification SP.1406	5/2-SP.1408/2
Lin	ne 77107 - 0	Fluid	System	
Dan	g. fluid type	Coating	De pres	Op tem
Area	a	Sketch Sht 1/1	sometric code	Page 1
Zones	s			

		В	allestr	a		•			S	KETCH	ES MATERIAL LIST	•	I	PROJ	1E35		REV: 0	13	8/04/2010
	PUMA	.5		13/04/20	010 11.0	7.03	1						Ī	OOC:	1E35	-65-024	•		
			Ball	estra						SUI	LPHUREX GH/F	Size: In	Thk:	mm	Temp	:°C	Pres: BAR	(Corr: mm
Mark	S1	S2		T1	Т2		Len mm	Qty	Un	Pip. class	Component					Gen. Bolt	Weight (Kg)	As.bly	Branch
1433	1/2	0	In	2,77		mm	,00	5,00	_	205	Pipe ASME B36.10 PL Seamless API 5I	GR. B					6,33	<u> </u>	
1504	1/2	0	In	2,77		mm	,00	1,00	m	226	Pipe ASME B36.19 PL Seamless ASTM	A 312 TI	P 304				1,29		
5396	1/2	0	In			mm	,00	1,00	NR	226	Valve Ball Full Port SB-ATI-VS120/0 L AARH) Forged AISI 304 S 194	UG 900 L	B LF ((125÷2	50	5381			
5397	1/2	0	In			mm	,00	1,00	NR	226	Valve Check SB-ATI-VR134/0 FLG 900 Forged AISI 304 R 174) LB LF (125÷25	50 AAI	RH)	5145			
3107	1/2	0	In			mm	,00	2,00	NR	205	Valve Gate ST.46270/3 SW-F 800# Forg	ged ASTM	1 A 105	5 G 61			3,40		
5399	1/2	0	In	2,77		mm	,00	4,00	NR	226	Flange Weld Neck ASME B16.5 900 LE Forged ASTM A 182 GR. F304	B LM (125	5÷250 A	AARH))	5145			
1049	1/2	0	In			mm	,00	1,00	NR	226	Coupling TA 50.7/2 THRD-F NPT 3000 F304	0# Forged	ASTM	1 A 182	2 GR.		0,12		
5145	3/4	0	In			mm	100,00	20,00	NR	226	Stud Bolt + 2 Nuts TA 50.48B/28 ASMI ASTM A 193 B7/A194 2H Galvanized	E B18.2.1	UNC/2	2.2 TA	В. 9		16,80		
5394	1/2	0	In			mm	,00	6,00	NR	226	Gasket TA 50.5/31 900 LB LM-LF (125	÷250 AAI	RH) _]	B4C FI	LAT				
5381	1/2	0	In			mm	30,00	16,00	NR	226	Screws for valves ASME B 18.2.1 /UNC	ASTM A	193 E	37 Galv	anized		1,28		

M Erection

SX1

SLS - SECT. 77 - UTIL

77108 - 0

1	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 226	Welding specification SP.1406/2	2-SP.1408/2
	Line 77108 - 0	Fluid	System	
J	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	sometric code	Page 1
Z	ones			

1 / 1

Total Kg:

TOTAL Kg:

29,22

Balle	estra	SKETCHES MATERIAL LIST	PROJ	: 1E35	REV: 0	13/04/2010
PUMA5	13/04/2010 11.07.03		DOC:	1E35-65-024		
	Ballestra	SULPHUREX GH/F	Size: In Thk: mm	Temp: °C	Pres: BAR	Corr: mm
				Gen. Bolt		

Mark	S1	S2		T1	T2	Len mm	Qty	Um	Pip. class	Component	Gen. Bolt	Weight (Kg) As	s.bly B	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		
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		
	·	•	•						N	1 Erection	Total Kg:	16,89		
SX3	SLS - SI	ECT. 77 -	UTIL		77109	- 0			SX1	1/1	TOTAL Kg:	16,89		

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 205 Welding specification SP.1406/2-SP.1407/2
Line 77109 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1
Zones

		Bal	lestra						S	KETCH	ES MATERIAL LIST		PROJ:	1E35		REV: 0	13/04/2010
	PUMA5	5	1	13/04/20	10 11.07.	03							DOC:	1E35-	-65-024		
			Balles	tra						SUL	PHUREX GH/F	Size: In	Thk: mm	Temp:	°C	Pres: BAR	Corr: mm
Mark	S1	S2		T1	T2		Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg) As	bly Branch

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		
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:	16,89		
SX3	SLS - SI	ECT. 77 -	UTIL		77110) - 0			SX1	1/1	TOTAL Kg:	16,89		

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 205 Welding specification SP.1406/2-SP.1407/2

Line 77110 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1

Zones

		В	allestr	a					S	KETCH	IES MATERIAL LIST		PRO	J: 1E35	5	REV: 0	3/04/2010
	PUMA5	í		13/04/20	010 11.07	7.03							DOC	: 1E35	5-65-024		
			Ball	lestra						SUI	LPHUREX GH/F	Size: In	Thk: mm	Temp	o: °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		203	Pipe ASME B36.10 PL Seamless API 5I	GR. B				161,97	
469	1+1/2	0	In			mm	,00	1,00	NR	203	Flange Slip-On ASME B16.5 150 LB RI ASTM A 105	F (125÷250) AARH) F	orged	5193	1,40	
158	1+1/2	0	In	3,68		mm	,00	1,00	NR	203	45° Elbow Long Radius ASME B16.9 B GR. WPB	E Wrough	t S ASTM	A 234		0,18	
326	1+1/2	0	In	3,68		mm	,00	5,00	NR	203	90° Elbow Long Radius ASME B16.9 B GR. WPB	E Wrough	t S ASTM	A 234		1,84	
5193	1/2	0	In			mm	75,00	4,00	NR	203	Stud Bolt + 2 Nuts TA 50.48B/28 ASME ASTM A 193 B7/ASTM A 194 GR.2H	E B18.2.1	UNC/2.2 TA	AB. 9		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				
		•	,							N	1 Erection				Total Kg:	165,87	

SX1

SLS - SECT. 77 - UTIL

77111 - 0

Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 203	Welding specification SP.1406/2-SP.1407/3	
Line 77111 - 0	Fluid	System	
Dang. fluid type	Coating	De pres	Op tem
Area	Sketch Sht 1/1	Isometric code	Page 1
Zones			

1 / 1

TOTAL Kg:

		В	allestr	a					S	KETCH	IES MATERIAL LIST		PROJ	: 1E35		REV: 0	13	/04/2010
	PUMA	15		13/04/20	010 11.07	.03	1						DOC:	1E35	-65-024			
			Ball	lestra						SU	LPHUREX GH/F	Size: In	Thk: mm	Temp	: °C	Pres: BAR	C	Corr: mm
Mark	S1	S2		T1	Т2		Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg)	As.bly	Branch
1435	1	0	In	3,38		mm	,00	1,00		203	Pipe ASME B36.10 PL Seamless API 5I	GR. B				2,50		
2830	1	0	In			mm	,00	1,00	NR	203	Valve Ball Full Port ST.46330/3 THRD- BRASS NICKEL PLATED S 87	F NPT 200) LB Forged			0,60		
467	1	0	In			mm	,00	1,00	NR	203	Flange Slip-On ASME B16.5 150 LB REASTM A 105	F (125÷250	AARH) Fo	rged	5192	0,80		
324	1	0	In	3,38		mm	,00	1,00	NR	203	90° Elbow Long Radius ASME B16.9 B GR. WPB	E Wrought	S ASTM A	234		0,14		
5192	1/2	0	In			mm	70,00	4,00	NR	203	Stud Bolt + 2 Nuts TA 50.48B/28 ASME ASTM A 193 B7/ASTM A 194 GR.2H	E B18.2.1 U	JNC/2.2 TA	B. 9		0,44		
661	1	0	In			mm	,00	1,00	NR	203	Gasket TA 50.5/31 150 LB RF (125÷250	AARH) _	B5C					
										N	A Erection				Total Kg:	4,48		

SX1

SLS - SECT. 77 - UTIL

SX3

77112 - 0

Plant SX3 SLS - SECT. 77 - UTILPiping Class 203Welding specification SP.1406/2-SP.1407/3Line 77112 - 0FluidSystemDang. fluid typeCoatingDe presOp temAreaSketch Sht 1/1Isometric codePage 1Zones

1 / 1

4,48

TOTAL Kg:

		В	Ballestr	a					S	KETCH	IES MATERIAL LIST		PRO)J: 1E:	35	REV: 0	13/04/2010
	PUMA	5		13/04/20	010 11.07	7.03							DO	C: 1E	35-65-024		
			Ball	estra						SU	LPHUREX GH/F	Size: In	Thk: mm	Ter	np: °C	Pres: BAR	Corr: mm
										_							
Mark	S1	S2		T1	T2		Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg) As.bl	y Branch
1493	1/2	0	In	2,77		mm	,00	5,00	m	202	Pipe ASME B36.10 THRD-M NPT Sea	ımless API	5L GR. E			6,33	
				_				-			Galvanized				•	-	
252	1/2	0	In			mm	,00	3,00	NR	202	90° Elbow TA 50.7/2 THRD-F NPT 30	00# Forge	1 ASTM	105		1,20	
				-							Galvanized				•	'	
	M Erection											Total Kg:	7,53				

SX1

SLS - SECT. 77 - UTIL

77113 - 0

Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specification	
Line 77113 - 0	Fluid	System	
Dang. fluid type	Coating	De pres	Op tem
Area	Sketch Sht 1/1	Isometric code	Page 1
Zones			

TOTAL Kg:

		В	allesti	ra					,	SKETCH	HES MATERIAL LIST		PROJ:	1E35		REV: 0	13	3/04/2010
	PUMA	.5		13/04/20	010 11.07	7.04	1						DOC:	1E35-65	5-024			
			Bal	lestra						SU	LPHUREX GH/F	Size: In Th	ık: mm	Temp: °C	i ·	Pres: BAR	(Corr: mm
Mark	S1	S2		T1	Т2		Len mm	n Qty	Un	n Pip. class	Component			Ge	en. 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 Sea Galvanized	mless API 5L	GR. B			7,59		
2828	1/2	0	In			mm	,00	1,00	NI	R 202	Valve Ball Full Port ST.46330/3 THRD- BRASS NICKEL PLATED S 87	F NPT 200 L	B Forged			0,30		
252	1/2	0	In			mm	,00	4,00	NI	R 202	90° Elbow TA 50.7/2 THRD-F NPT 30 Galvanized	00# Forged A	STM A 10)5		1,60		
1275	1/2	0	In			mm	,00	1,00	NI	R 202	Union TA 50.7/2 THRD-F NPT 3000# Galvanized	Forged ASTM	I A 105			0,30		
										1	M Erection			1	Fotal Kg:	9,79		
SX3	SLS - SI	ECT. 77	- UTIL			77114	- 0			SX1	1 /	1		TO	TAL Kg:	9,79		

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 202 Welding specification
Line 77114 - 0 Fluid System

Dang. fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1
Zones

Ball	estra	SKETCHES MATERIAL LIST	PROJ:	1E35	REV: 0	13/04/2010
PUMA5	13/04/2010 11.07.04		DOC:	1E35-65-024		
	Ballestra	SULPHUREX GH/F	Size: In Thk: mm	Temn• °C	Pres: BAR	Corr. mm

3.6. 1	01	G2		TD:1	TO	T	04	TT.	D: 1	0	C . D . 14	XX - 14 (X -) A - 11	D 1
Mark	S1	S2		T1	T2	Len mm	Qty	Um	Pip. class	Component	Gen. Bolt	Weight (Kg) As.bly	Branch
1497	1+1/2	0	In	3,68	mm	,00	18,00	m	202	Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B		72,89	
										Galvanized			
2832	1+1/2	0	In		mm	,00	1,00	NR	202	Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged		1,50	
						•		•		BRASS NICKEL PLATED S 87			
394	1+1/2	0	In		mm	,00	2,00	NR	202	Flange ASME B16.5 THRD-F NPT 150 LB RF (125÷250 AARH)	5127	3,00	
										Forged ASTM A 105 Galvanized			
256	1+1/2	0	In		mm	,00	3,00	NR	202	90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		7,20	
					-					Galvanized	•		
5127	1/2	0	In		mm	75,00	8,00	NR	202	Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9		0,96	
										ASTM A 193 B7/A194 2H Galvanized	1		
663	1+1/2	0	In		mm	,00	2,00	NR	202	Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C			
									N	M Erection	Total Kg:	85,55	
SX3	SLS - SE	CT. 77 -	UTIL		7711	5 - 0			SX1	1/1	TOTAL Kg:	85,55	

PICV_77.1	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specification	
	Line 77115 - 0	Fluid	System	
	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

Balle	estra	SKETCHES MATERIAL LIST		PROJ:	1E35	REV: 0	13/04/2010
PUMA5	13/04/2010 11.07.04			DOC:	1E35-65-024		
	Ballestra	SULPHUREX GH/F	Size: In	Thk: mm	Temp: °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	25,00	m	202	Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B		62,55	
										Galvanized			
2830	1	0	In		mm	,00	1,00	NR	202	Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged		0,60	
	Į.		1		-	· -				BRASS NICKEL PLATED S 87	•	II.	
392	1	0	In		mm	,00	2,00	NR	202	Flange ASME B16.5 THRD-F NPT 150 LB RF (125÷250 AARH)	5126	1,80	
						_				Forged ASTM A 105 Galvanized	1		
254	1	0	In		mm	,00	5,00	NR	202	90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		5,50	
										Galvanized	1		
5126	1/2	0	In		mm	70,00	8,00	NR	202	Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9		0,88	
	Į.		1		-					ASTM A 193 B7/A194 2H Galvanized	•	II.	
661	1	0	In		mm	,00	2,00	NR	202	Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C			
		,						•	N	M Erection	Total Kg:	71,33	
SX3	SLS - S	ECT. 77 -	UTIL		77116	- 0			SX1	1 / 1	TOTAL Kg:	71,33	

PICV_77.2	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specification	
	Line 77116 - 0	Fluid	System	
	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

Ball	estra	SKETCHES MATERIAL LIST	PRO	I: 1E35	REV: 0	13/04/2010
PUMA5	13/04/2010 11.07.04		DOC	: 1E35-65-024		
	Ballestra	SULPHUREX GH/F	Size: In Thk: mm	Temp: °C	Pres: BAR	Corr: mm

								г			1		
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	30,00	m	202	Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B		37,97	
										Galvanized			
2828	1/2	0	In		mm	,00	1,00	NR	202	Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged		0,30	
										BRASS NICKEL PLATED S 87			
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		2,00	
			•	•						Galvanized		·	
4673	1/2	0	In		mm	,00	3,00	NR	202	Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		0,84	
			'							Galvanized			
1275	1/2	0	In		mm	,00	3,00	NR	202	Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		0,90	
										Galvanized		'	
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	
		·							N	M Erection	Total Kg:	42,13	
SX3	SLS - S	ECT. 77	- UTIL		77117	- 0			SX1	1/1	TOTAL Kg:	42,13	

KY_77.2A	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specificatio	n
KY_77.2B	Line 77117 - 0	Fluid	System	
KY_77.2C	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

Balle	estra	SKETCHES MATERIAL LIST		PROJ:	1E35	REV: 0	13/04/2010
PUMA5	13/04/2010 11.07.04			DOC:	1E35-65-024		
	Ballestra	SULPHUREX GH/F	Size: In	Thk: mm	Temp: °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	48,00	m	202	Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B Galvanized		60,76	
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	
4673	1/2	0	In		mm	,00	3,00	NR	202	Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized		0,84	
1275	1/2	0	In		mm	,00	3,00	NR	202	Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105 Galvanized		0,90	
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	
								•	, I	M Erection	Total Kg:	64,92	
SX3	SLS - S	ECT. 77	- UTIL	,	77118	- 0			SX1	1/1	TOTAL Kg:	64,92	

KY_77.3A	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specificatio	n
KY_77.3B	Line 77118 - 0	Fluid	System	
KY_77.3C	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

Ballestra	SKETCHES MATERIAL LIST	PROJ	: 1E35	REV: 0	13/04/2010
PUMA5 13/04/2010 11.07.04		DOC:	1E35-65-024		
Ballestra	SULPHUREX GH/F	Size: In Thk: mm	Temp: °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	20,00	m	202	Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B		25,32	
	·		·	·						Galvanized		·	
2828	1/2	0	In		mm	,00	1,00	NR	202	Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged		0,30	
		,				-			-	BRASS NICKEL PLATED S 87			
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		2,00	
										Galvanized			
4673	1/2	0	In		mm	,00	2,00	NR	202	Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		0,56	
										Galvanized			
1275	1/2	0	In		mm	,00	2,00	NR	202	Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		0,60	
						· -			1	Galvanized	'		
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	
	·	,	·						N	M Erection	Total Kg:	28,9	
SX3	SLS - S	ECT. 77 -	- UTIL		77119	- 0			SX1	1/1	ΓΟΤΑL Kg:	28.9	

KY_77.4A	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specification	on
KY_77.4B	Line 77119 - 0	Fluid	System	
	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

Balle	estra	SKETCHES MATERIAL LIST	PROJ:	1E35	REV: 0	13/04/2010
PUMA5	13/04/2010 11.07.04		DOC:	1E35-65-024		
	Ballestra	SULPHUREX GH/F	Size: In Thk: mm	Temp: °C	Pres: BAR	Corr: mm

								Т			1		_
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		15,19	
										Galvanized			
2828	1/2	0	In		mm	,00	1,00	NR	202	Valve Ball Full Port ST.46330/3 THRD-F NPT 200 LB Forged		0,30	
										BRASS NICKEL PLATED S 87			
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		2,00	
		,	•							Galvanized		·	
4673	1/2	0	In		mm	,00	2,00	NR	202	Tee Straight TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		0,56	
			'							Galvanized			
1275	1/2	0	In		mm	,00	2,00	NR	202	Union TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		0,60	
										Galvanized		'	
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	
	·			·					N	M Erection	Total Kg:	18,77	
SX3	SLS - S	ECT. 77	- UTIL		77120	- 0			SX1	1/1	TOTAL Kg:	18,77	

KY_77.5A	Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specificatio	n
KY_77.5B	Line 77120 - 0	Fluid	System	
	Dang. fluid type	Coating	De pres	Op tem
	Area	Sketch Sht 1/1	Isometric code	Page 1
	Zones			

Balle	estra	SKETCHES MATERIAL LIST	P	PROJ:	1E35	REV:	0	13/04/2010
PUMA5	13/04/2010 11.07.05		Γ	OOC:	1E35-65-024			
	Ballestra	SULPHUREX GH/F	Size: In Thk: 1	mm	Temp: °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	10,00	m	202	Pipe ASME B36.10 THRD-M NPT Seamless API 5L GR. B		25,02	
	·	·								Galvanized			
392	1	0	In		mm	,00	1,00	NR	202	Flange ASME B16.5 THRD-F NPT 150 LB RF (125÷250 AARH)	5126	0,90	
		'								Forged ASTM A 105 Galvanized		<u> </u>	
86	1	0	In		mm	,00	2,00	NR	202	45° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		1,70	
	ı		1	1	1	•				Galvanized	'		
254	1	0	In		mm	,00	4,00	NR	202	90° Elbow TA 50.7/2 THRD-F NPT 3000# Forged ASTM A 105		4,40	
										Galvanized	1		
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		0,44	
	ı		1	1	1	•				ASTM A 193 B7/A194 2H Galvanized	'		
661	1	0	In		mm	,00	1,00	NR	202	Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C			
	'			'					N	M Erection	Total Kg:	32,46	
SX3	SLS - S	ECT. 77	- UTIL		7712	1 - 0			SX1	1/1	TOTAL Kg:	32,46	

Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 202	Welding specification					
Line 77121 - 0	Fluid	System					
Dang. fluid type	Coating	De pres	Op tem				
Area	Sketch Sht 1/1	Isometric code	Page 1				
Zones							

		I	Ballestı	·a					S	KETCH	ES MATERIAL LIST		PROJ:	1E35		REV: 0	13/04/2010
	PUMA	A 5		13/04/20	10 11.07	.05						1E35	35-65-024				
			Bal	lestra						SUI	LPHUREX GH/F	Size: In	Thk: mm	Temp	:°C	Pres: BAR	Corr: mm
Mark	S1	S2		T1	T2		Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg) As.bly	y Branch
1435	1	0	In	3,38		mm	,00	10,00	m	205	Pipe ASME B36.10 PL Seamless API 51	GR. B				25,02	
3109	1	0	In			mm	,00	1,00	NR	205	Valve Gate ST.46270/3 SW-F 800# Forg	ged 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 R	F (125÷250	AARH) For	ged	5192	0,80	
156	1	0	In	3,38		mm	,00	2,00	NR	205	ASTM A 105 45° Elbow Long Radius ASME B16.9 B GR. WPB	E Wrought	S ASTM A	234		0,14	
324	1	0	In	3,38		mm	,00	4,00	NR	205	90° Elbow Long Radius ASME B16.9 B GR. WPB	E Wrought	S ASTM A	234		0,54	
5192	1/2	0	In			mm	70,00	4,00	NR	205	Stud Bolt + 2 Nuts TA 50.48B/28 ASMI ASTM A 193 B7/ASTM A 194 GR.2H	E B18.2.1 U	JNC/2.2 TAI	3.9		0,44	
661	1	0	In			mm	,00	1,00	NR	205	Gasket TA 50.5/31 150 LB RF (125÷250	O AARH) _	B5C				
	*	*	•				-			N	1 Erection				Total Kg:	30,24	

SX1

SLS - SECT. 77 - UTIL

SX3

77122 - 0

1 / 1

TOTAL Kg:

		В	allestr	a				SKETCHES MATERIAL LIST PROJ: 1						: 1E35		REV: 0	13/04/2010
	PUMA	.5		13/04/2	010 11.0	7.05							DOC:	1E35-0	65-024		
	Ballestra									SU	LPHUREX GH/F	Size: In T	hk: mm	Temp: °	°C	Pres: BAR	Corr: mm
Mark	S1	S2		T1	T2		Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg) As.h	ly Branch
1433	1/2	0	In	2,77		mm	,00	6,00	m	205	Pipe ASME B36.10 PL Seamless API 51	GR. B		ĺ		7,59	
3107	1/2	0	In			mm	,00	1,00	NR	205	Valve Gate ST.46270/3 SW-F 800# For	ged 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 R ASTM A 105	F (125÷250 A	AARH) Fo	rged :	5191	0,40	
98	1/2	0	In			mm	,00,	2,00	NR	207	45° Elbow TA 50.6/1 SW-F 3000# Forg	ed ASTM A	105			0,36	
266	1/2.	0	In			mm	.00	3.00	NR	207	90° Elbow TA 50 6/1 SW-F 3000# Forg	ed ASTM A	105			0.75	

Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9

Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C

ASTM A 193 B7/ASTM A 194 GR.2H

SX3	SLS - SECT. 77 - UTIL	77123 - 0	SX1	1 / 1	TOTAL Kg:	11,24

M Erection

65,00

mm

,00

4,00 NR 205

1,00 NR 205

1/2

1/2

5191

659

Plant SX3 SLS - SECT. 77 - UTIL	Piping Class 207	Welding specification	on SP.1406/2-SP.1407/2
Line 77123 - 0	Fluid	System	
Dang. fluid type	Coating	De pres	Op tem
Area	Sketch Sht 1/1	Isometric code	Page 1
Zones			

0,44

11,24

Total Kg:

		Ba	allestra	ì				SKETCHES MATERIAL LIST PROJ: 1E35							·	REV: 0	13/	04/2010
	PUMA:	5		13/04/20	10 11.07	.05							DOC:	1E35-	65-024			
			Balle	stra						SU	LPHUREX GH/F	Size: In Th	k: mm	Temp:	p: °C Pres: BAR		BAR Cor	
	1	1		I	1	1	T			1				ı				T
Mark	S1	S2		T1	T2		Len mm	Qty	Um	Pip. class	Component				Gen. Bolt	Weight (Kg) A	s.bly	Branch
1433	1/2	0	In	2,77		mm	,00	14,00	m	205	Pipe ASME B36.10 PL Seamless API 5I	L GR. B				17,72		
3107	1/2	0	In			mm	,00	1,00	NR	205	Valve Gate ST.46270/3 SW-F 800# Forg	ged ASTM A 1	05 G 61			1,70		
465	1/2	0	In			mm	,00	1,00	NR	205	Flange Slip-On ASME B16.5 150 LB R	F (125÷250 AA	ARH) For	rged	5191	0,40		
	'						-				ASTM A 105				•			
63	1/2	0	In			mm	,00	2,00	NR	207	45° Elbow TA 50.7/2 THRD-F NPT 30	00# Forged AS	STM A 10	05		0,64		
266	1/2	0	In			mm	,00	6,00	NR	207	90° Elbow TA 50.6/1 SW-F 3000# Forg	ed ASTM A 10	05			1,50		

Tee Straight TA 50.6/1 SW-F 3000# Forged ASTM A 105

Gasket TA 50.5/31 150 LB RF (125÷250 AARH) _ B5C

ASTM A 193 B7/ASTM A 194 GR.2H

Stud Bolt + 2 Nuts TA 50.48B/28 ASME B18.2.1 UNC/2.2 TAB. 9

 SX3
 SLS - SECT. 77 - UTIL
 77124 - 0
 SX1
 1/1
 TOTAL Kg:
 22,68

1,00 NR 207

4,00 NR 205

1,00 NR 205

,00

,00

65,00

mm

mm

mm

1/2

1/2

1/2

0

4687

5191

659

Plant SX3 SLS - SECT. 77 - UTIL Piping Class 207 Welding specification SP.1406/2-SP.1407/2

Line 77124 - 0 Fluid System

Dang, fluid type Coating De pres Op tem

Area Sketch Sht 1/1 Isometric code Page 1

Zones

0,28

		В	allestr	ra		•		SKETCHES MATERIAL LIST PROJ: 1E35								REV: 0	13/	/04/2010	
	PUMA	.5		13/04/20	010 11.07	.06							DOC:	1E35-65-0	024				
			Ball	lestra				SULPHUREX GH/F Size: In Thk: mm Temp							o: °C Pres: BAR			Corr: mm	
Mark	S1	S2		T1	T2		Len mm	Qty	Um	Pip. class	Component			Gen	ı. Bolt	Weight (Kg)	As.bly	Branch	
1433	1/2	0	In	2,77		mm	,00	80,00	m	203	Pipe ASME B36.10 PL Seamless API 5L	GR. B				101,26			
2828	1/2	0	In			mm	,00	8,00	NR	203	Valve Ball Full Port ST.46330/3 THRD-I BRASS NICKEL PLATED S 87	F NPT 200 L	B Forged			2,40			
3116	1/2	0	In			mm	,00	8,00	NR	203	Valve Globe ST.46004/3 THRD-F NPT 51	200 LB Forge	ed BRON	ZE D		5,60			
4687	1/2	0	In			mm	,00	14,00	NR	203	Tee Straight TA 50.6/1 SW-F 3000# Forg	ged ASTM A	105			3,92		T	
4398	1/2	1/4	In			mm	,00	28,00	NR	203	Coupling Reducing TA 50.7/2 THRD-F 105	NPT 3000# F	Forged AS	TM A		0,84			
4449	3/4	1/2	In			mm	,00	2,00	NR	205	Coupling Reducing TA 50.6/1 SW-F 300	0# Forged AS	STM A 10	5		0,06			

M Erection

SX1

TRAC WH - 0

SX3

SLS - SECT. 77 - UTIL

Plant SX3 SLS - SECT. 77 - UTILPiping Class 203Welding specification SP.1406/2-SP.1407/3Line TRAC WH - 0FluidSystemDang. fluid typeCoatingDe presOp temAreaSketch Sht 1/1Isometric codePage 1Zones

1 / 1

Total Kg:

TOTAL Kg:

114,08