

"AS - BUILT"

NOTES:

1. CONTRACTOR TO DECIDE ON FIELD WELDS AND EXTRA SPOOL LENGTH WHEREVER NECESSARY.
2. WELD NO. ① TO ②①

DESIGN DATA

- | | |
|------------------------------|------------|
| 1. DESIGN PRESSURE | : 92 BARG |
| 2. OPERATING TEMPERATURE | : 100° C |
| 3. HYDROSTATIC TEST PRESSURE | : 138 BARG |
| 4. CORROSION ALLOWANCE | : 1/8" |
| 5. RADIOGRAPHY | : 100% |
| 6. INSULATION | : PP |
| 7. INSPECTION BY | : GSI (QC) |
| 8. PWHT | : NO |

BILL OF MATERIAL

FABRICATION MATERIALS

| PT NO | COMPONENT DESCRIPTION | N. S. (INS) | PIPE SPEC. | QTY |
|-------|---------------------------------------------------|-------------|------------|------|
| 1 | PIPE SMLS BE SCH 80 A106 GR. B, NACE | 6 | D1 | 3.1M |
| 2 | CONC RED BW SCH 80 A234 GR. WPB, NACE | 8 x 6 | D1 | 1 |
| 3 | EQUAL TEE BW SCH 80 A234 GR. WPB, NACE | 6 x 6 | D1 | 2 |
| 4 | WELDOLET SCH 80 x SCH 160 A105, NACE | 6 x 1.1/2 | D1 | 1 |
| 5 | WELDOLET SCH 80 x SCH 160 A105, NACE | 6 x 3/4 | D1 | 1 |
| 6 | 90 DEG LR ELBOW SMLS BW SCH 80 A234 GR. WPB, NACE | 6 | D1 | 4 |
| 7 | FLANGE 900LB WN RTJ SCH 80 A105, NACE | 8 | D1 | 1 |
| 8 | FLANGE 900LB WN RTJ SCH 80 A105, NACE | 6 | D1 | 1 |
| 9 | FLANGE 600LB WN RF SCH 80 A105, NACE | 6 | D1 | 1 |
| 10 | FLANGE 1500LB WN RTJ SCH 160 A105, NACE | 1.1/2 | D1 | 1 |
| 11 | FLANGE 1500LB WN RTJ SCH 160 A105, NACE | 3/4 | D1 | 1 |

ERECTION MATERIALS

| PT NO | COMPONENT DESCRIPTION | N. S. (INS) | PIPE SPEC. | QTY |
|-------|----------------------------------------------------------------------------|-------------|------------|-----|
| 12 | R49 OVAL RING SOFT IRON BHN90 ZINC COATED | 8 | D1 | 1 |
| 13 | R20 OVAL RING SOFT IRON BHN90 ZINC COATED | 1.1/2 | D1 | 1 |
| 14 | R14 OVAL RING SOFT IRON BHN90 ZINC COATED | 3/4 | D1 | 1 |
| 15 | 230 MM LG STUD BOLTS C/W NUTS A193 GR. B7/A194 GR. 2H HOT-DIP GALV. COATED | 1.3/8 | D1 | 12 |
| 16 | 145 MM LG STUD BOLTS C/W NUTS A193 GR. B7/A194 GR. 2H HOT-DIP GALV. COATED | 1 | D1 | 4 |
| 17 | 170 MM LG STUD BOLTS C/W NUTS A193 GR. B7/A194 GR. 2H HOT-DIP GALV. COATED | 3/4 | D1 | 4 |
| 18 | DB&B SLIM-LINE INSTRUMENT MONOFLANGE 1500LB PER PIPING SPEC. E1 | 3/4 | D1 | 1 |
| 19 | 901TW 137 | 1.1/2 | | 1 |
| 20 | 901PT 137 | 3/4 | | 1 |

SUPPORTS


| | | | | |
|----|---------------|---|----|---|
| 21 | STD TTI CLAMP | 6 | D1 | 1 |
|----|---------------|---|----|---|

| | | | | | |
|---------|---------------------------|----|------|------|----------|
| XO | AS BUILT | AR | RAGU | SD | 09.04.12 |
| 1 | AS BUILT | FT | BS | SD | 07.06.10 |
| 0 | APPROVED FOR CONSTRUCTION | FT | BS | SD | 17.04.08 |
| REV. NO | DESCRIPTION OF REVISION | BY | CHKD | APPD | DATE |

CLIENT :



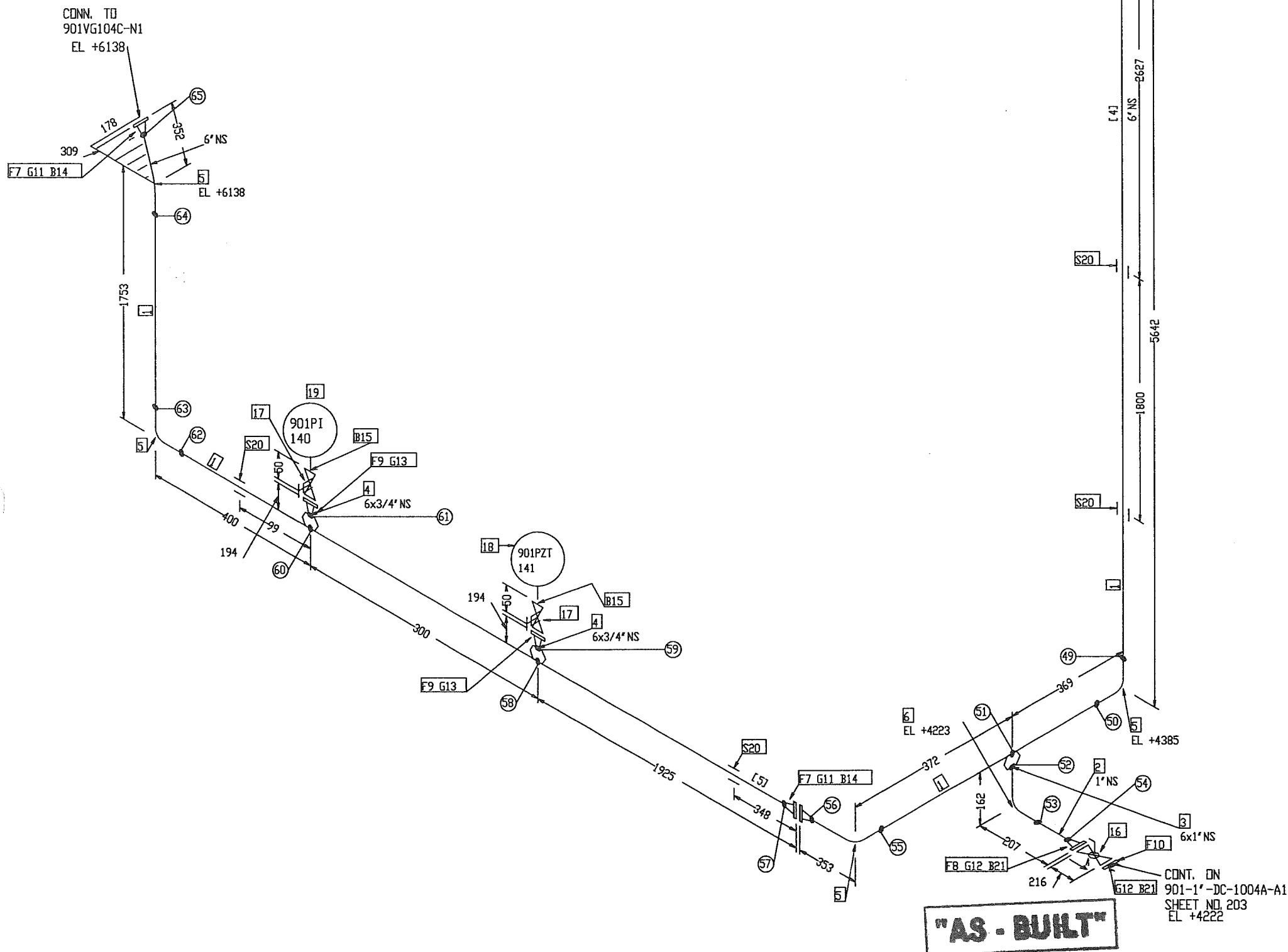
| | | | |
|-----------|--------------------------------------------------------------|------------------|-----------------------|
| PROJECT : | FPSO CIDADE DEITAJÁ | JOB NO. | 21-9781 |
| TITLE : | PIPING ISOMETRIC | CLASS : | ABS |
| LINE NO | 901-6"-PG-1014A-D1 (SHT.1/4) 901-6"-PG-1014B-D1 (SHT.1/4) | TYP. DRAWING NO. | 7000-04-L-26-XN-05121 |

| | | | | | | | | | | | | |
|---------------------|-----|---------------------------------------------------------------------------------------|-----------------|----|--------|------|-------------|---------------|-----|----|-----|----|
| BSI DISCIPLINE SIGN | | APPROVED BY | | SD | | | | | | | | |
| PROCESS | AD | CHECKED BY | CG | | | | | | | | | |
| MECHANICAL | VC |  | | | | | | | | | | |
| PIPING | MH | | | | | | | | | | | |
| STRUCTURAL | WCH | | | | | | | | | | | |
| E & I | AK | | | | | | | | | | | |
| PROJECT | ED | ACAD DES | G375-5121-33_XO | | JOB NO | K375 | BSI DES. NO | GSI-G375-5121 | SHT | 33 | REV | XO |

JURONG SHIPYARD PTE LTD
(A subsidiary of SembCorp Marine Ltd)
SINGAPORE

ENGINEERING DEPARTMENT XXX SECTION





"AS - BUILT"

- NOTES:**
- CONTRACTOR TO DECIDE ON FIELD WELDS AND EXTRA SPOOL LENGTH WHEREVER NECESSARY.
 - WELD NO. (45) TO (56)

| DESIGN DATA | |
|------------------------------|------------|
| 1. DESIGN PRESSURE | : 92 BARG |
| 2. OPERATING TEMPERATURE | : 49° C |
| 3. HYDROSTATIC TEST PRESSURE | : 138 BARG |
| 4. CORROSION ALLOWANCE | : 1/8" |
| 5. RADIOGRAPHY | : 100% |
| 6. INSULATION | : NO |
| 7. INSPECTION BY | : GSI (QC) |
| 8. PWHT | : NO |

BILL OF MATERIAL

| FABRICATION MATERIALS | | | | |
|------------------------|---------------------------------------------------------------------------------------------------------------|-------------|-----------|------|
| PT NO | COMPONENT DESCRIPTION | N. S. (INS) | PIPE SPEC | QTY |
| PIPE | | | | |
| 1 | PIPE SMLS BE SCH 80 A106 GR. B, NACE | 6 | D1 | 9.2M |
| 2 | PIPE SMLS BE SCH 160 A106 GR. B, NACE | 1 | D1 | 75MM |
| FITTINGS | | | | |
| 3 | WELDOLET SCH 80 x SCH 160 A105, NACE | 6 x 1 | D1 | 1 |
| 4 | WELDOLET SCH 80 x SCH 160 A105, NACE | 6 x 3/4 | D1 | 2 |
| 5 | 90 DEG LR ELBOW SMLS BW SCH 80 A234 GR. WPB, NACE | 6 | D1 | 4 |
| 6 | 90 DEG LR ELBOW SMLS BW SCH 160 A234 GR. WPB, NACE | 1 | D1 | 1 |
| 7 | FLANGE 600LB WN RF SCH 80 A105, NACE | 6 | D1 | 4 |
| 8 | FLANGE 600LB WN RF SCH 160 A105, NACE | 1 | D1 | 1 |
| 9 | FLANGE 1500LB WN RTJ SCH 160 A105, NACE | 3/4 | D1 | 2 |
| 10 | FLANGE 600LB SW RF SCH 160 A105, NACE | 1 | D1 | 1 |
| GASKETS | | | | |
| 11 | SPIRAL WOUND GASKET 600LB RF 4.5mm THK SS316 WINDING/GRAPHITE FILLER W/3mm THK CS CENTERING RING, ZINC COATED | 6 | D1 | 2 |
| 12 | SPIRAL WOUND GASKET 600LB RF 4.5mm THK SS316 WINDING/GRAPHITE FILLER W/3mm THK CS CENTERING RING, ZINC COATED | 1 | D1 | 2 |
| 13 | R14 OVAL RING SOFT IRON BHN90 ZINC COATED | 3/4 | D1 | 2 |
| BOLTS | | | | |
| 14 | 180 MM LG STUD BOLTS C/W NUTS A193 GR. B7/A194 GR. 2H HOT-DIP GALV. COATED | 1 | D1 | 36 |
| 15 | 170 MM LG STUD BOLTS C/W NUTS A193 GR. B7/A194 GR. 2H HOT-DIP GALV. COATED | 3/4 | D1 | 8 |
| VALVES / IN-LINE ITEMS | | | | |
| 16 | BALL VALVE 600# RF AS PER PIPE SPEC D1 | 1 | D1 | 1 |
| 17 | DB&B SLIM-LINE INSTRUMENT MONOFLANGE 1500LB PER PIPING SPEC. E1 | 3/4 | D1 | 2 |
| INSTRUMENTS | | | | |
| 18 | 901PZT-141 | 3/4 | | 1 |
| 19 | 901PI-140 | 3/4 | | 1 |
| 20 | STD TT1 CLAMP | 6 | D1 | 4 |
| 21 | 95 MM LG STUD BOLTS C/W NUTS A193 GR. B7/A194 GR. 2H HOT-DIP GALV. COATED | 5/8 | D1 | 8 |

| | | | | | |
|---------|---------------------------|------|------|------|----------|
| XO | AS BUILT | AR | RAGU | SD | 09.04.12 |
| 3 | REVISED AS SHOWN | RAGU | LYC | SD | 01.12.11 |
| 2 | ADDED LOW POINT DRAIN | RAGU | BS | SD | 25.08.11 |
| 1 | AS BUILT | FT | BS | SD | 07.06.10 |
| 0 | APPROVED FOR CONSTRUCTION | NN | CG | SD | 17.04.08 |
| REV. NO | DESCRIPTION OF REVISION | BY | CHKD | APPD | DATE |

CLIENT: **OOG K FPSO**

PROJECT: **FPSO CIDADE DEITAJÁ**

JOB NO.: **21-9791**

QUANTITY: **1**

CLASS: **ABS**

TITLE: **PIPING ISOMETRIC**

LINE NO: **901-6"-PG-1014A-D1 (SHT.4/4)**
901-6"-PG-1014B-D1 (SHT.4/4)

THPJ DRAWING NO.: **7000-04-L-26-XN-05121**

BSI DISCIPLINE SIGN: **AK** APPROVED BY: **SD**

PROCESS: **AK** CHECKED BY: **BS**

MECHANICAL: **VC** DRAWN BY: **RAGU**

PIPING: **MM** SCALE: **N.T.S**

STRUCTURAL: **WKK**

E & I: **AK**

PROJECT: **EG** ACAD DIS: **G375-5121-3A_X0** JOB NO: **K375** BSI DIS. NO: **GSI-G375-5121** SHT: **36** REV: **X0**

JURONG SHIPYARD PTE LTD
(A subsidiary of SembCorp Marine Ltd)

ENGINEERING DEPARTMENT **XXX** SECTION

WASCO Gas Services International (S) Pte Ltd

JSL

ISO 9001