

BILL OF MATERIAL

| | FABRICATION MATERIALS | | | |
|----------------|--|----------------------------|----------------|-----------------|
| PT NO | COMPONENT DESCRIPTION | N, S, (2N1) | PIPE SPEC, | QTY |
| 1 2 3 | PIPE SMLS BE SCH 80 A106 GR. B, NACE WELDDLET SCH 80 x SCH 160 A105, NACE WELDDLET SCH 80 x SCH 160 A105, NACE | 8 8 x 1. 1/2 8 x 3/4 | D1 D1 D1 | 11. 1 1 1 |
| 4 | 90 DEG LR ELBOW SMLS BW SCH 80 A234 GR. WPB, NACE | 8 | D1 | 3 |
| 5 | 45 DEG ELBOW SMLS BW SCH 80 A234 GR. WPB, NACE | 8 | D1 | 1 |
| 6 7 8 | FLANGE 600LB WN RF SCH 80 A105, NACE FLANGE 600LB WN RF SCH 160 A105, NACE FLANGE 600LB WN RF SCH 160 A105, NACE | 8 1. 1/2 3/4 | D1 D1 D1 | 1 1 1 |
| | ERECTION MATERIALS | | | |
| PT NO | COMPONENT DESCRIPTION | N. S. (ZNI) | PIPE SPEC. | QTY |
| 9 | SPIRAL WOUND GASKET 600LB RF 4.5mm THK SS316 WINDING/GRAPHITE FILLER W/3mm THK CS CENTERING RING, ZINC CDATED | 8 | D1 | 2 |
| 10 | SPIRAL WOUND GASKET 600LB RF 4.5mm THK SS316 WINDING/GRAPHITE FILLER W/3mm THK CS CENTERING RING, ZINC CDATED | 1. 1/2 | D1 | 1 |
| 11 | SPIRAL WOUND GASKET 600LB RF 4.5mm THK SS316 WINDING/GRAPHITE FILLER W/3mm THK CS CENTERING RING, ZINC COATED | 3/4 | D1 | 1 |
| 12 | 220 MM LG STUD BOLTS C/W NUTS A193 GR. B7/A194 GR. 2H HDT-DIP GALV. COATED | 1. 1/8 | D1 | 12 |
| 13 | 115 MM LG STUD BOLTS C/W NUTS A193 GR. 87/A194 GR. 2H HOT-DIP GALV. COATED | 3/4 | D1 | 4 |
| 14 | 145 MM LG STUD BOLTS C/V NUTS A193 GR. 87/A194 GR. 2H HOT-DIP GALV, COATED | 5/8 | D1 | 4 |
| 15 | DB&B SLIM-LINE INSTRUMENT MONDFLANGE 600LB PER PIPING SPEC. D1 | 3/4 | D1 | 1 |
| 16 17 18 | 901RD 124 901TW 125 901PZT 125 | 8 1. 1/2 3/4 | | 1 1 1 |
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|---------|---------------------------|-----|-------|-------------------|----------|--|
| | | 7 | Vaga | | ľ | |
| X0 | AS BUILT | AR | RAGU | ∕ ⁸ SD | 09.04.12 | |
| 3 | AS BUILT | ក៍ | BS | SD | 07.06.10 | |
| 2 | REVISED AS NOTED | NN | CG | SD | 14.05.08 | |
| 1 | REVISED PER P&ID CHANGES | NN | CG | SD | 17.04.08 | |
| 0 | APPROVED FOR CONSTRUCTION | SHU | CG | SD | 27.03.08 | |
| REV. NO | DESCRIPTION OF REVISION | RY | CHKID | APP'D | DATE | |



21-9791 FPSO CIDADE DEITAJAÍ PIPING ISOMETRIC | LINE 105 | 901-8"-PG-1009A-D1 (SHT.1/2) | TAMES 1 | ABS | THEY DESCRIBE 105, 7000-04-L-26-XN-05121

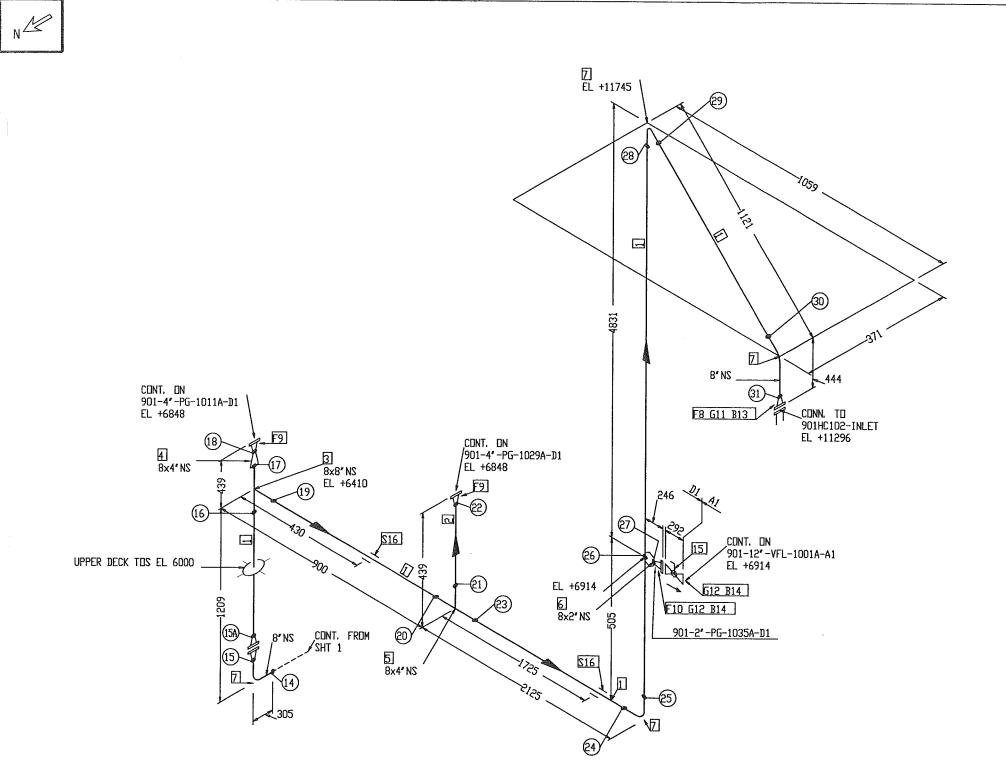
7. INSPECTION BY

: GSI (QC) : NO

GSI-G375-5121

JURONG SHIPYARD PTE LTD

ENGINEERING DEPARTMENT XXX SECTION



BILL OF MATERIAL

| PT ND | COMPONENT DESCRIPTION | ,2 'N (SNI) | PIPE SPEC. | QTY |
|----------|---|----------------|---------------|-------|
| 1 | PIPE SMLS BE SCH 80 A106 GR. B, NACE | 8 | D1 | 8, 2M |
| 2 | PIPE SMLS BE SCH 80 A106 GR. B, NACE | 4 | D1 | 0, 2M |
| 3 | EQUAL TEE BW SCH 80 A234 GR. WPB, NACE | 8 x 8 | D1 | 1 |
| 4 | CONC RED BY SCH 80 A234 GR. WPB, NACE | 8 x 4 | D1 | 1 |
| 5 | REDUCING TEE BW SCH 80 A234 GR. WPB, NACE | 8 x 4 | D1 | i |
| 6 | WELDDLET SCH 80 x SCH 160 A105, NACE | 8 x 2 | D1 | 1 |
| 7 | 90 DEG LR ELBOW SMLS BW SCH 80 A234 | 8 | D1 | Â |
| | GR. WPB, NACE | | | ' |
| 8 | FLANGE 600LB WN RF SCH 80 A105, NACE | 8 | D1 | 1 |
| 9 | FLANGE 600LB WN RF SCH 80 A105, NACE | 4 | D1 | · • |

ERECTION MATERIALS

FLANGE 600LB WN RF SCH 160 A105, NACE

FABRICATION MATERIALS

| 7 <u>0</u> | COMPONENT DESCRIPTION | N. S. (2NI) | PIPE SPEC. | QTY |
|------------|---|----------------|---------------|-----|
| 11 | SPIRAL WOUND GASKET 600LB RF 4.5mm THK SS316 WINDING/GRAPHITE FILLER W/3mm THK CS CENTERING RING, ZINC COATED | 8 | D1 | 1 |
| 12 | SPIRAL WOUND GASKET 600LB RF 4.5mm THK SS316 WINDING/GRAPHITE FILLER W/3mm THK CS CENTERING RING, ZINC CDATED | 2 | D1 | 5 |
| 13 | 195 MM LG STUD BOLTS C/W NUTS A193 GR. B7/A194 GR. 2H HDT-DIP GALV. CDATED | 1, 1/8 | D1 | 12 |
| 14 | 115 MM LG STUD BOLTS C/W NUTS A193 GR. B7/A194 GR. 2H HDT-DIP GALY. COATED | 5/8 | D1 | 16 |
| 15 | BALL VALVE 600LB RF, BV-29 (CSC) | 2 | D1 | 1 |
| | SUPPORTS | | | |
| 16 | STD TTI CLAMP | 8 | D1 | 2 |

| 7 | | | | | |
|---------|---------------------------|------|-----------|------|----------|
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| | | 1 | V Section | HK) | |
| X0 | AS BUILT | AR - | RAGU | ₹ ŚĎ | 09.04.12 |
| 2 | AS BUILT | fÍ | BS | | 07.06.10 |
| 1 | REVISED PER P&ID CHANGES | NN | CG | SD | 14.04.08 |
| 0 | APPROVED FOR CONSTRUCTION | SHU | CG | | 27.03.08 |
| REV. NO | DESCRIPTION OF REVISION | BY | CHK'D | APP® | DATE |
| CLIENT | | | | | J |

OOG W

PROJECT: FPSO CIDADE DEITAJAÍ

PIPING ISOMETRIC 901-8"-PG-1009A-D1 (SHT.2/2) TOTAL STREET TO THE STREET ESI DISCIPLINE SIEN

Wasco Gas Services International (S) Pte Ltd

ISL

STRUCTURAL

AR VC

MA RH

GSI-G375-5121 JURONG SHIPYARD PTE LTD

SHT 18 XO

"AS - BUILT"

DESIGN DATA

1. DESIGN PRESSURE : 56.2 BARG 2. OPERATING TEMPERATURE : 98° C 3. HYDROSTATIC TEST PRESSURE : 84.3 BARG 4. CORROSION ALLOWANCE : 1/8"

5. RADIOGRAPHY : 100% 6. INSULATION 7. INSPECTION BY

SPOOL LENGTH WHEREVER NECESSARY. 2. WELD NO. (14) TO (31)

1. CONTRACTOR TO DECIDE ON FIELD WELDS AND EXTRA

B. PWHT

: GSI (QC) : NO

ENGINEERING DEPARTMENT XXX SECTION