



# BONGA NORTH EPC 1

JOB CARD NUMBER: A02.L1-TI-0012

WORKPACK NUMBER: A02

## JOB CARD INFORMATION

|                               |                        |                      |                            |
|-------------------------------|------------------------|----------------------|----------------------------|
| PREPARED BY: Vitor Pereira    | DATE OF: 20/06/2025    | REV.: 64             | STATUS: checked            |
| APPROVED BY: None             | DATE OF:               |                      |                            |
| SUBSYSTEM: 03-03A_BN          | DISCIPLINE: TIE-IN     | WORKING CODE: TDA    |                            |
| SYSTEM: 03                    | LOCATION: A02          | SEQUENTIAL NUMBER:   |                            |
| TAG: TP-01                    | TOTAL MAN-HOURS: 54.00 | MATERIAL:            |                            |
| JOB CARD DESCRIPTION:         |                        |                      |                            |
| COMMENTS: None                |                        |                      |                            |
| ACTIVITY ID P6: CST-EPC1-6450 | HOT-WORK REQUIRED: NO  | TOTAL WEIGHT (kg): 0 | TOTAL DURATION (hs): 10.00 |

## DETAILED DESCRIPTION OF WORK

| TASK NUMBER | TASK DESCRIPTION                   | COMPLETED? | % M/h  |
|-------------|------------------------------------|------------|--------|
| 5           | Inspect the welding of the flanges |            | 24,07% |
| 7           | Install spool                      |            | 75,93% |

## MAN-HOUR - DESCRIPTION

| ITEM        | TASK NUMBER | DIRECT LABOR         | MAN-H | QTY           |
|-------------|-------------|----------------------|-------|---------------|
| 1           | 5           | Foreman              | 2,00  | 1,00          |
| 2           | 5           | Welder               | 3,00  | 2,00          |
| 3           | 5           | Firewatch            | 4,00  | 1,00          |
| 4           | 5           | Mechanical assembler | 1,00  | 1,00          |
| 5           | 7           | Foreman              | 2,00  | 1,00          |
| 6           | 7           | Welder               | 3,00  | 2,00          |
| 7           | 7           | Firewatch            | 4,00  | 1,00          |
| 8           | 7           | Mechanical assembler | 5,00  | 1,00          |
| 9           | 7           | Pipe fitter          | 6,00  | 4,00          |
| TASK NUMBER |             |                      | MAN-H | DURATION (hs) |
| 5           |             |                      | 13,00 | 4,00          |
| 7           |             |                      | 41,00 | 6,00          |

## ERECTION MATERIALS

| ITEM | DESCRIPTION  | DIM   | PMTO CODE        | QTY   | COMMENTS |
|------|--|-------|------------------|-------|----------|
| 1    | PIPE, CARBON STEEL, DIMENSIONS ACCORDING ASME B36.10, MATERIAL ASTM A333 GR.6 - SEAMLESS, BEVELLED ENDS ASME B16.25, ACCORDING NACE MR0175.  | 16    | PAPAA.100.00895  | 1,30  | TAM 2026 |
| 2    | FLANGE, WN, RF, CL600, ASME B16.5 ASTM A105, NACE MR-01-75 SCH 100   | 16    | PAAAA.160.00086E | 2,00  | TAM 2026 |
| 3    | FLANGE BLIND, RF, CL600 ASME B16.5 ASTM A 105 NACE MR-01-75 SCH 100  | 16    | PAAAA.160.00086E | 1,00  | TAM 2026 |
| 4    | FLANGE, WN, RF, CL600, ASME B16.5 ASTM A105, NACE MR-01-75 SCH 100   | 14    | PAAAA.140.00086  | 2,00  | TAM 2026 |
| 5    | FLANGE BLIND, RAISED FACE, CLASS 600 ASME B16.5, CARBON STEEL ASTM A105, NACE MR-01-75/ISO15156 (1) Controlled Hardness per NACE MR-0175, SCH 100.   | 14    | N/A              | 2,00  | TAM 2026 |
| 6    | REDUCING TEE, SMLS, ASTM A420 GR WPL6, BUTT WELD, ASME B16.9, NACE MR-01-75/ISO15156   | 16    | PAFTF.160.05003  | 2,00  | TAM 2026 |
| 7    | 300 STUDBOLT WITH NUTS, ASTM A193-B7/A194-2H WITH HOT-DIP GALVANISED   | 1 1/2 | 300_BOLT_OPT211  | 20,00 | TAM 2026 |
| 8    | STUD BOLT WITH 2 HEAVY HEXAGONAL NUTS, BOLT MATERIAL ASTM A193 Gr B7, NUTS MATERIAL HEX HEAVY ASTM A194 Gr 2H; BOLT THREAD TYPE, - 1 - ASME B1.1, UNC 2A; 1 7 - 3 - ASME B1.1, UN 2A - 8 thd/in; NUT THREAD TYPE - 1 - ASME B1.1, UNC 2B; 1 7 - 3 - ASME B1.1, UN 2B - 8 thd/in; COATING ZINC PLATED PER ASTM B633 (ASME B16.5), SC2 (0.0003 PLATING THICKNESS), TYPE II (WITH A SUPPLEMENTARY YELLOW CHROMATE TREATMENT). | 1 3/8 | N/A              | 40,00 | TAM 2026 |
| 9    | STUD BOLT WITH 2 HEAVY HEXAGONAL NUTS, BOLT MATERIAL ASTM A193 Gr B7, NUTS MATERIAL HEX HEAVY ASTM A194 Gr 2H; BOLT THREAD TYPE, - 1 - ASME B1.1, UNC 2A; 1 7 - 3 - ASME B1.1, UN 2A - 8 thd/in; NUT THREAD TYPE - 1 - ASME B1.1, UNC 2B; 1 7 - 3 - ASME B1.1, UN 2B - 8 thd/in; COATING ZINC PLATED PER ASTM B633 (ASME B16.5), SC2 (0.0003 PLATING THICKNESS), TYPE II (WITH A SUPPLEMENTARY YELLOW CHROMATE TREATMENT). | 1 3/8 | N/A              | 20,00 | TAM 2026 |
| 10   | GASKET, SPIRAL WOUND NON-ASBESTOS FLEXITE SUPER FILLER WITH STAINLESS STEEL AISI 304 WINDINGS, FLEXITALLIC STYLE CO OR SDDS APPROVED EQ ASME B16.20, RF CLASS 600, THK 3.2 mm, ASME B16.20 FOR FLANGE ASME B16.5. THE MATERIAL SHALL BE THE REQUIREMENTS OF THE NACE MR-01-75 / ISO 15156 STANDARD.  | 16    | PZGAY.160.00002  | 2,00  | TAM 2026 |
| 11   | KaMOS GASKET RF CL. 600.   | 16    | K6CS-CL600RF.16  | 2,00  | TAM 2026 |
| 12   | PADDLE BLANK AND SPACER; ASTM A516 GR. 70; CARBON STEEL; ASME B16.48 STANDARD; CLASS 600; BETWEEN FLANGES; ASME B16.5, RAISED FACE, FINISHING SPIRAL SERRATED, MINI 125 TO MAX 250 AARH; THE MATERIAL SHALL BE COMPLIANT WITH THE NACE MR-01-75 / ISO 15156 STANDARD REQUIREMENTS.   | 16    | N/A              | 1,00  | TAM 2026 |
| 13   | Tunion Pipe supports and base plate Plate 15mm Thk. S355 (0.5m x 0.5m) Pipe 6 Sch.80 ASTM A 106 GR B SMLS (1.5mtr length)  | N/A   | N/A              | 1,00  | TAM 2026 |

## EQUIPMENT & SPECIAL TOOLING

| ITEM | SPECIAL TOOLING   | QTY  | ITEM | SPECIAL TOOLING                              | QTY  |
|------|---|------|------|--|------|
| 1    | 10 LOCKING PLIERS   | 1,00 | 1    | 12 FLAT, ROUND, HALF-ROUND, AND SQUARE FILES | 1,00 |
| 2    | 8 INSULATED UNIVERSAL PLIERS  | 1,00 | 2    | HYDRAULIC JACK, 5 TON                        | 1,00 |
| 3    | 12 ADJUSTABLE HACKSAW   | 1,00 | 3    | BALL-PEEN HAMMER 500 g, 1000 g               | 1,00 |
| 4    | WOODEN FILE HANDLE  | 1,00 | 4    | IRON LEVEL                                   | 1,00 |
| 5    | ALLEN WRENCH 1/16, 3/32, 1/8, 3/16, 1/4                                   | 1,00 | 5    | 300 g CENTER PLUMB                           | 1,00 |
| 6    | SCREWDRIVER 3/16 x 4, 1/4 x 6, 1/4 x 8, 5/16 x 10                         | 1,00 | 6    | PUNCH  | 1,00 |
| 7    | OPEN-END WRENCH 1/4 x 5/16, 3/8 x 7/16, 1/2 x 9/16, 1/4 x 25/32, 1 x 5/16 | 1,00 | 7    | SCRIBER                                      | 1,00 |
| 8    | 12 ADJUSTABLE WRENCH  | 1,00 | 8    | MANUAL HOIST, 1 TON                          | 1,00 |
| 9    | 10 HALF-MOON COMPASS  | 1,00 | 9    | CHISEL                                       | 1,00 |
| 10   | 300 mm STAINLESS STEEL RULER  | 1,00 | 10   | TIRFOR, 1.6 TON                              | 1,00 |
| 11   | STEEL BRUSH   | 1,00 | 11   | BOMBA DE TESTE HIDROST.                      | 1,00 |
| 12   | CARPENTER'S SQUARE  | 1,00 | 12   | LIXADEIRA                                    | 1,00 |
|      |   |      | 13   | TALHA MANUAL, 1 TON                          | 1,00 |

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| QC INSPECTOR | SNEPCo    | MABU      |
|--------------|-----------|-----------|
| SIGNATURE    | SIGNATURE | SIGNATURE |
| NAME         | NAME      | NAME      |
| DATE         | DATE      | DATE      |



## BONGA NORTH EPC 1

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WORKPACK NUMBER: **A02**

### SAFETY - CONDITIONS & RECOMMENDATIONS

|   |   |   |  |   |
|---|---|---|--|---|
| <input type="checkbox"/> PPE GENERAL            | <input type="checkbox"/> COLD WORK PERMIT | <input type="checkbox"/> FIRE EXTINGUISHER  | <input type="checkbox"/> FALL PROTECTION             | <input type="checkbox"/> MARINE SAFETY            |
| <input type="checkbox"/> BLIND ISOLATION SYSTEM | <input type="checkbox"/> HOT WORK PERMIT  | <input type="checkbox"/> FIRE WATCH         | <input type="checkbox"/> SPARK PROTECTION            | <input type="checkbox"/> SEVERE WEATHER PREP      |
| <input type="checkbox"/> JOB SAFETY ANALYSIS    | <input type="checkbox"/> BARRICADES       | <input type="checkbox"/> DIVER SAFETY       | <input type="checkbox"/> SIMULTANEOUSLY DRILL        | <input type="checkbox"/> ENVIRONMENTAL PROTECTION |
| <input type="checkbox"/> GAS LEAK PROTECTION    | <input type="checkbox"/> LIFTING PLAN     | <input type="checkbox"/> HAZARDOUS MATERIAL | <input type="checkbox"/> WEATHER PROTECTION REQUIRED | <input type="checkbox"/> PPE SPECIAL              |

OTHER/COMMENTS:


### QUALITY CONTROL AND INSPECTION

CQ FORMS:

### ENGINEERING DOCUMENTS

| Discipline | Document                         | Tag   | Rev . | Status |
|------------|----------------------------------|-------|-------|--------|
| T IE-IN    | BNO-NET CO-300-PX-2365-21014-001 | TP-01 | 02A   | None   |
| T IE-IN    | BNO-NET CO-300-PX-2365-21024-001 | TP-01 | 02A   | None   |

### COMPANY COMMENTS

| JobCard N°: A02.L1-TI-0012  | QC INSPECTOR | SNEPCo    | MABU      |
|---|--------------|-----------|-----------|
|  | SIGNATURE    | SIGNATURE | SIGNATURE |
|   | NAME         | NAME      | NAME      |
|   | DATE         | DATE      | DATE      |