

# **Europe Asia Pipeline Company LTD.**

## **SPECIFICATION FOR TRUNNION BALL VALVES FOR CRUDE OIL SERVICE**

**27/11/2023**

**1. GENERAL**

This specification covers the manufacture, assembly, inspection, testing and supply of 4” Trunnion ball valves for EAPC Ltd.

**2. SCOPE OF SUPPLY**

The scope of supply shall include the following:

2.1 Twelve (12) 4” Trunnion ball valve Class (ANSI) 600 RF flanged Ends.

**3. DESIGN REQUIREMENTS**

**3.1 General**

Valves design should provide a tight mechanical seal and shall be unaffected by pressure variations.

**3.2 Valves characteristics:**

2.1.1 Type: Trunnion Mounted Full bore Ball Valve.

2.1.2 Body Design: Side Entry.

2.1.3 Gear operated.

2.1.4 The valves shall be zero leakage.

2.1.5 Anti-static and fire safe to API 607.

2.1.6 Isolation Valve Feature: Double Block and Bleed.

2.1.7 Flanged ends according to ASME B16.5 and ASME B16.34 Class #600.

2.1.8 Self-relieving.

2.1.9 API Monogram required.

**3.3 Materials:**

3.3.1 The material shall meet the requirements for sour service.

3.3.2 Body: ASTM Forged Steel.

3.3.3 Stem: ASTM Stainless steel.

3.3.4 Ball: ASTM Stainless steel.

3.3.5 Seats: Reinforced PTFE.

3.3.6 Material for pressure-containing and pressure-controlling parts and bolting shall meet the requirements of NACE MR0175.

3.4 **Site Conditions**

3.4.1 Eastern Mediterranean inland terminals.

3.4.2 Temperature: 5 – 55 °C

3.4.3 Humidity: up to 90%

3.5 **Process Conditions**

Fluid : Crude oil (sour).

Temperature : +2°C to 60°C.

Special Conditions : Sandstorm and dust.

Installation : Aboveground Service.

3.6 **Standards of Compliance**

3.6.1 Basic design: API 6D.

3.6.2 Test & inspection: API 6D & API 598.

3.6.3 Fire Safe Conforms: API 607.

4. **TESTING**

4.1 Test certificates shall be sent to purchaser.

4.2 The testing shall be in accordance with API 6D, API 598 & API 607 standards.

4.3 Certificates To EN10204.3.1.B.

5. **PAINING**

5.1 Valve shall be coated in accordance with manufacturer standard and to meet site conditions as specified in para. 3.4.

6. **ASSEMBLY OF COMPONENTS**

All units shall be supplied completely assembled – ready for installation.

7. **MARKING**

7.1 The valve shall be marked in accordance with requirements of API 6D.

7.2 The nameplate shall contain at least the following data:

7.2.1 Name of manufacturer.

7.2.2 Size, rating and max. Operating temperature.

7.2.3 Body, stem, seats, ball and seals materials.

7.2.4 Manufacturer type & serial number.

7.2.5 Date of manufacture.

## **8. MECHANICAL GUARANTEE**

Vendor will guarantee that the equipment furnished is free from faults in design, workmanship and materials.

Should any defect in design, materials, workmanship or operating characteristics develop during the first year of operation (but not over twenty four (24) months from the date of shipment), the Vendor will make all necessary or desirable alternations, repairs and replacements of said defective equipment, free of charge and shall also pay transportation involved of the above mentioned to and from the plant.

If the defect or functional failure cannot be corrected, the Vendor agrees to replace promptly, free of charge, the faulty equipment.

## **9. DOCUMENTATION**

The following documents are to be sent in English:

With bid:

- General arrangement drawings of valve with overall dimensions.
- Cross section showing construction details.
- Material Specification.

With Order:

- Installation, Operating and Maintenance Instruction/manuals, including full parts list.
- Certificate of conformance to NACE (sour service).
- Coating/plating certification.
- Non-Israeli manufacturers must provide Eur1 certificate or US Certificate of Origin prior to shipment.

**10. BILL OF QUANTITIES**

EAPC Pipeline - Ball valves design according to API 6D						
Item	Type	Size/Class/ Ends	Operation	Qty	Unit Price	Total Price
1	Trunnion ball valve	4" ANSI 600 RF Flanged Ends per ASME B16.5	Manual	12		