

### **03. SCOPE OF SUPPLY AND TECHNICAL SPECIFICATIONS**

### **3. SCOPE OF SUPPLY AND TECHNICAL SPECIFICATIONS**

#### **1.1 SCOPE OF SUPPLY**

- 3.1.1 Supply of following Carbon steel gate valves/Ball valves as per specifications .Valves are in completely assembled form suitably protected for transportation and suitable for abnormal weather conditions.

<b>S/N</b>	<b>Item</b>	<b>Required Qty.</b>
<b>1</b>	6" Dia. Carbon Steel Gate Valve	01 No.
<b>2</b>	8" Dia. Carbon Steel Gate Valve	01 No.
<b>3</b>	10" Dia. Carbon Steel Gate Valve	05 Nos.
<b>4</b>	12" Dia. Carbon Steel Gate Valve	02 Nos.
<b>5</b>	14" Dia. Carbon Steel Gate Valve	01 No.

- 3.1.2 All codes and standards for manufacture, testing, inspection etc .shall be of latest editions.

#### **3.1.3 Documentation**

3.1.3.1 Vendor shall possess a valid API accreditation/ license

3.1.3.2 All documents shall be in English language and SI system of units.

3.1.3.3 Vendor shall submit with the bidding document followings,

3.1.3.3.1 Copy of valid API accreditation/ license

3.1.3.3.2 Manufacture's complete descriptive and illustrative catalogue/ literature

3.1.3.3.3 Detailed dimensions, cross section drawing with parts/ material list, weight etc., for the valves and flanges to manufactures standard

3.1.3.3.4 Drawings for valves with accessories like gear operator, extension bonnet, extended stems with stands bypass etc .giving major salient dimension

3.1.3.4 Following supplementary documentation certified by third party inspection company approved by CPSTL is required to provide in line with API accreditation as below,

3.1.3.4.1 NDE records

3.1.3.4.2 Hardness test report on pressure containing parts

3.1.3.4.3 Heat treatment certification records

3.1.3.4.4 Pressure test/leak test and other test reports (including pressure, test duration, test medium and acceptance criteria)

3.1.3.4.5 Coating/Painting certification

3.1.3.4.6 Material test certification

3.1.3.4.7 Fire type test certification

3.1.4 Supplier shall give a manufacturer's warranty for all the equipment supplied by him for a minimum period of 18 months from the date of shipment or 12 months from the date of installation, whichever is later subject to not exceeding 18 months from the date of dispatch.

3.1.5 Inspection and testing of the valves shall be carried out as follows.

3.1.5.1 Inspection during production

All valves shall be tested as per API 598 by the manufacturer and witnessed by the reputed Independent Third Party Inspection Company approved by CPSTL. All test certificates shall be provided during pre-shipment inspection.

3.1.5.2 Pre-shipment Inspection

Third party inspection of material test certificates of valves and testing as per API 598 shall be carried out by the reputed third party inspection.

Tests are as follows) As per API 598

For Gate Valves

- Shell Test
- Backseat Test
- High Pressure Closure Test

3.1.6 Supply of as built detailed drawings, all test certificates, along with the valves.

3.1.7 Supplier shall supply any special tools required as in clause No.1.6.22

## 1.2 TECHNICAL SPECIFICATION

**All Carbon Steel Gate Valves should have country of origin. Only European, USA, UK, Japanese, South African product are acceptable.**

### 3.2.1 Carbon Steel Gate Valves (Class 150)

**3.2.1.2 Description:** Bolted bonnet Carbon Steel Gate Valves of sizes equal or higher than 2" for use of refined petroleum product such as Diesel, Petrol, Kerosene, Fuel oil.

**3.2.1.3 Operational condition :**

- a) Pressure Class: 150 LB (Valves sizes on and above 2")
- b) Pressure Rating :285 psig @ -20 °F to 100 °F
- c) Raising Stem Gear Operated: Valve Sizes 12" to 18"
- d) Raising Stem Manually Operated Hand Wheel: Valve Sizes below 12"

**3.2.1.4** The valves should be of carbon steel, swing disc, removable seat bolted cover type should conform to following features.

- a) For sizes equal or higher than 2" design as per general requirements of Standard API 6D, API 600 & ASME B16.34.
- b) End connection should be raised face flange and flange dimensions should conform to ASME B 16.5 (Serrated) for sizes equal or higher than 2"
- c) Face to face dimensions should conform to API6D and ASME B 16.10
- d) Valve inspection and testing as per API 598.
- e) Bore size should be Reduce bore assistant .

**3.2.1.5 Material**

- a) Materials of component of the valve should conform to general requirements of API 600 and
  - Body and bonnet - ASTM A 216 Gr. WCB
  - Seat and Wedge facing - 13% Chromium Steel
  - Stud - ASTM A 193 Gr .B7
  - Stud Nut - ASTM A 194 Gr .2H
- b) Trim material should be specified and should conform to API 600 Trim 8 (13Cr) normal trim material (supplier should forward manufacturer's certificate conforming the same).
- c) The materials of all parts of the valve to be specified according to ASTM standard.

### 3.2.1.6 Marking

- a) Valve marking, symbols, abbreviations etc .shall be in accordance with MSS-SP-25 or the standards referred in specification as applicable .Vendor name, valve rating, material designation, nominal size, direction of flow, )if any (etc . shall be integral on the body.
- b) Each valve shall have a corrosion resistance tag giving size, valve tag/code no, security attached on the valve.
- c) Paint or ink for marking shall not contain any harmful metal or metal salts such as zinc, lead or copper which cause corrosive attack on heating.
- d) Carbon steel valve shall be blast cleaned with grit to SSPC SA 2.5 coated with two coats of zinc rich primer.

### 3.1.2.7 Other Conditions

- a) Method of packing should be indicated in the Bid.
- b) Valves should be shipped with flange closed with suitable material or end caps.
- c) Exterior surface (un machined) should be painted with suitable paint and machined or threaded surface should be coated with easy removable rust preventive coating.
- d) The method of testing should conform to API 598 and valid test certificate should be supplied with the items and the supplier should mention in the Bid whether this can be supplied.
- e) Period of guarantee and the conditions of guarantee should be mentioned in the Bid.
- f) The supplier should forward the copy of certificate of Authority to use official monogram of API and the originals of internationally published catalogues / literature relevant to the valve.
- g) The supplier should forward all details mentioned above for evaluation purposes .The offers of those who fail to submit requested details will not be considered for evaluation.

**Signature of the Bidder: .....**

**Date:.....**

**(Common Seal)**