

## SECTION 15106 - BALL VALVES

### City of San Diego, CWP Guidelines

#### PART 1 – GENERAL

##### 1.1 WORK OF THIS SECTION

- A. The WORK of this Section includes providing manually-operated ball valves with epoxy coating, operators, and accessories.

##### 1.2 RELATED SECTIONS

- A. The WORK of the following Section applies to the WORK of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this WORK.

0.1 Section 15100 Valves, General

##### 1.3 FACTORY TESTING

- A. Valves shall be tested in compliance with AWWA C507 and Section 15100.
- B. Proof-of-design tests shall be submitted in compliance with Section 15100 for all ball valves size 10-inch and larger.

#### PART 2 – PRODUCTS

##### 2.1 BALL VALVES (6-INCH AND LARGER)

- A. Construction: Except as otherwise indicated, ball valves in sizes 6-inches and larger shall comply with ANSI/AWWA C 507, with cast iron, ductile iron, or cast steel bodies, support legs or pads, flanged ends, and shall be designed for velocities up to 35 fps, temperatures up to 125 degrees F, and design pressures of [150 psi] [250 psi] [300 psi]. The balls shall be fabricated with cast iron, ductile iron, or cast steel, and designed for shaft- or trunnion-mounting, with tight shut-off, single or double seat, and full bore. The valves shall be rubber- or metal-seated, with stainless steel or monel shafts, and shall include at least one thrust bearing. Ferrous surfaces of valves 6-inches and larger, where contact with water is indicated, shall be epoxy-coated conforming to Section 09800.
- B. Operators: Except as otherwise indicated, ball valves shall have manual operators with handwheel, position indicator, and 2-inch square operating nut. Operators for buried valves and for power operated valves shall comply with Section 15101.

##### 2.2 BALL VALVES (4-INCH AND SMALLER)

- A. General **Requirements:** Except as otherwise indicated, ball valves in sizes up to 4 inches shall have manual operators with lever or handwheel. Ferrous surfaces of valves where contact with water is indicated shall be epoxy-coated conforming to Section 09800.
- B. Body: Ball valves up to 1-1/2 inches in size shall have bronze or forged brass 2- or 3-piece bodies with ends threaded and shall be designed for a pressure rating of not less than 300 psi. Valves 2-inch to 4-inch in size shall have bronze forged brass or steel 2-or 3-piece bodies with flanged ends and shall be designed for a pressure rating of [125 psi] or [150 psi].

- C. Balls: The balls shall be fabricated of solid brass, chrome plated bronze, or Type 316 stainless steel, with full openings.
- D. Stems: The valve stems shall be of the blow-out proof design, and fabricated of bronze or Type 316 stainless steel and shall include reinforced Teflon seals.
- E. Seats: The valve seats shall be of Teflon or Buna-N.

## 2.3 PLASTIC BALL VALVES

- A. General **Requirements:** Plastic ball valves designed for use with corrosive fluids shall be fabricated of polyvinyl chloride (PVC), chlorinated polyvinyl chloride (CPVC), or polyvinylidene fluoride (PVDF), as recommended by the manufacturer for use in the service indicated. Valves shall have manual operators except as otherwise indicated.
- B. Construction: Plastic ball valves shall have union ends or flanged ends conforming to ANSI B 16.5, class 150. Balls shall have full size ports and Teflon seats. Body seals, union O-ring seals, and stem seals shall be Viton. Valves shall be suitable for a maximum working of 150 psi at 73 degrees F for PVC.

## 2.4 MANUFACTURERS

- A. Ball valves shall be manufactured by the following (or equal):

- 1. Ball Valves (6-inch and Larger):

Grove Valve and Regulator Company  
McNally Pittsburg, Inc.  
Henry Pratt Company  
Willamette Valve, Inc.

- 2. Ball Valves (4-inch and Smaller):

Jamesbury Corporation  
Jenkins Bros.  
Lunkenheimer Flow Control  
Wm. Powell Company  
Worcester Controls

- 3. Plastic Ball Valves:

ASAHI-America, (full port: ½ to 4 inches only)  
G F Plastic Systems, Inc., (full port: ½ to 2 inches only)  
NIBCO Inc., (Chemtrol), (full port: ½ to 4 inches only)  
Spears, (full port: ½ to 6 inches only)

**PART 3 – EXECUTION**

3.1 GENERAL

- A. Valves shall be installed in accordance with Section 15100.

**\*\* END OF SECTION \*\***