

**SECTION 220523.15 GATE VALVES FOR PLUMBING PIPING**

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Bronze gate valves.
2. Iron gate valves.
3. Chainwheels.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of valve.

1. Certification that products comply with NSF 61 and NSF 372.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR VALVES

A. Source Limitations for Valves: Obtain each type of valve from single source from single manufacturer.

B. ASME Compliance:

1. ASME B1.20.1 for threads for threaded end valves.
2. ASME B16.1 for flanges on iron valves.
3. ASME B16.10 and ASME B16.34 for ferrous valve dimensions and design criteria.
4. ASME B16.18 for solder joint.
5. ASME B31.9 for building services piping valves.

C. NSF Compliance: NSF 61 and NSF 372 for valve materials for potable-water service.

D. Bronze valves shall be made with dezincification-resistant materials. Bronze valves made with copper alloy (brass) containing more than 15 percent zinc are not permitted.

E. Valve Pressure-Temperature Ratings: Not less than indicated and as required for system pressures and temperatures.

F. Valve Sizes: Same as upstream piping unless otherwise indicated.

G. RS Valves in Insulated Piping: With 2-inch stem extensions.

H. Valve Bypass and Drain Connections: MSS SP-45.

2.2 BRONZE GATE VALVES

A. Bronze Gate Valves, NRS, Class 125:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - a. American Valve, Inc.
  - b. Apollo Flow Controls; Conbraco Industries, Inc.
  - c. NIBCO INC.
  - d. WATTS.
  - e. Or approved equal
2. Description:
  - a. Standard: MSS SP-80, Type 1.
  - b. CWP Rating: 200 psig.
  - c. Body Material: Bronze with integral seat and screw-in bonnet.
  - d. Ends: Threaded or solder joint.
  - e. Stem: Bronze.
  - f. Disc: Solid wedge; bronze.
  - g. Packing: Asbestos free.
  - h. Handwheel: Malleable iron, bronze, or aluminum.

B. Bronze Gate Valves, RS, Class 125:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. American Valve, Inc.
  - b. Apollo Flow Controls; Conbraco Industries, Inc.
  - c. Crane; a Crane brand.
  - d. NIBCO INC.
  - e. Or approved equal
2. Description:
  - a. Standard: MSS SP-80, Type 2.
  - b. CWP Rating: 200 psig.
  - c. Body Material: Bronze with integral seat and screw-in bonnet.
  - d. Ends: Threaded or solder joint.
  - e. Stem: Bronze.
  - f. Disc: Solid wedge; bronze.
  - g. Packing: Asbestos free.
  - h. Handwheel: Malleable iron, bronze, or aluminum.

C. Bronze Gate Valves, Press Ends:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Apollo Flow Controls; Conbraco Industries, Inc.
- b. Elkhart Products Corporation.
- c. Hammond Valve.
- d. Milwaukee Valve Company.
- e. NIBCO INC.
- f. Or approved equal

2. Description:

- a. Standard: MSS SP-80 and MSS SP-139.
- b. CWP Rating: Minimum 200 psig.
- c. Body Material: Bronze with integral seat and union-ring bonnet.
- d. Ends: Press.
- e. Press Ends Connection Rating: Minimum 200 psig.
- f. Stem: Brass or bronze non-rising.
- g. Disc: Solid wedge; bronze.
- h. Packing: Graphite.
- i. Port: Full.
- j. Handwheel: Malleable iron, bronze, or aluminum.

2.3 IRON GATE VALVES

A. Iron Gate Valves, NRS, Class 125:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Apollo Flow Controls; Conbraco Industries, Inc.
- b. Crane; a Crane brand.
- c. Milwaukee Valve Company.
- d. NIBCO INC.
- e. Or approved equal

2. Description:

- a. Standard: MSS SP-70, Type I.
- b. CWP Rating: 200 psig.
- c. Body Material: Gray iron with bolted bonnet.
- d. Ends: Flanged.
- e. Trim: Bronze.
- f. Disc: Solid wedge.
- g. Packing and Gasket: Asbestos free.

B. Iron Gate Valves, OS&Y, Class 125:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Apollo Flow Controls; Conbraco Industries, Inc.
- b. Crane; a Crane brand.

- c. Milwaukee Valve Company.
  - d. NIBCO INC.
  - e. Or approved equal
2. Description:
- a. Standard: MSS SP-70, Type I.
  - b. CWP Rating: 200 psig.
  - c. Body Material: Gray iron with bolted bonnet.
  - d. Ends: Flanged.
  - e. Trim: Bronze.
  - f. Disc: Solid wedge.
  - g. Packing and Gasket: Asbestos free.

### PART 3 - EXECUTION

#### 3.1 VALVE INSTALLATION

- A. Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.
- B. Locate valves for easy access and provide separate support where necessary.
- C. Install valves in horizontal piping with stem at or above center of pipe.
- D. Install valves in position to allow full stem movement.

#### 3.2 ADJUSTING

- A. Adjust or replace valve packing after piping systems have been tested and put into service but before final adjusting and balancing. Replace valves if persistent leaking occurs.

#### 3.3 GENERAL REQUIREMENTS FOR VALVE APPLICATIONS

- A. Use gate valves for shutoff service only.
- B. If valves with specified CWP ratings are unavailable, the same types of valves with higher CWP ratings may be substituted.

#### 3.4 DOMESTIC HOT- AND COLD-WATER VALVE SCHEDULE

- A. Pipe NPS 2 and Smaller:
  - 1. Bronze gate valves, NRS, Class 125 with soldered ends.
  - 2. Bronze gate valves, press ends.
- B. Pipe NPS 2-1/2 and Larger: Iron gate valves, NRS, Class 125 with flanged ends.

END OF SECTION 220523.15