

Materials Specification – 10 for PRESSURE REGULATING VALVES

1. SERVICE:

The function of the Pressure Regulating Valve (PRV) is to reduce an existing high pressure to a pre-adjusted lower downstream pressure in order to vary the rates of flow without causing shock or water hammer on the system.

2. VALVE DESCRIPTION:

The pressure regulating valve shall be a hydraulically operated, pilot controlled, diaphragm or piston activated globe or angle valve. The valve shall be fully stainless steel or bronze-trimmed. An indicator rod shall be furnished as an integral part of the valve in order to show the valve position. The valve shall be designed to provide an access opening in the valve body for the removal of the internal parts without the removal of the main valve body from the service line.

3. MATERIAL:

Valve body, flanges and covers shall be made of cast iron that conforms to ASTM A 126, Class B or ASTM A 48, Class 35; ductile iron that conforms to ASTM A 536, grade 65-45-12; or 300 series stainless steel. Bronze castings or parts for the internal trim shall conform to ASTM B 62.

4. VALVE ENDS:

Valves shall be furnished with flanged ends that are sized and drilled in accordance with ANSI B16.1, Class 125. Flanges shall be machined to a flat surface with a serrated finish in accordance with AWWA C207.

5. PILOT VALVE:

The pilot valve for controlling the operation of the main valve shall be a single seated, diaphragm operated and spring loaded type. The pilot valve shall be attached to the main valve with piping and isolation valves that are arranged for easy access in order to make adjustments and to allow for its removal from the main valve while the main valve is under pressure.

6. NEEDLE VALVE:

The needle valve shall be bronze or stainless steel and included with the main valve in order to control the speed of piston travel.

7. OPERATING PRESSURE:

The operating pressure shall be 150 psig.

8. TESTING:

The body of the pressure regulating valve shall be given a hydrostatic test to 150% of the operating pressure specified herein. A seat leakage test shall be made at the operating pressure.

9. COATINGS:

A. Internal Surfaces:

Internal ferrous surfaces, except machined or bearing surfaces, shall be prepared for coating per SSPC-SP-10. These surfaces shall then be coated with a two-part thermosetting polyamide epoxy in two or more uniform coats,

or with fusion bonded epoxy, to a minimum dry film thickness of 12 mils. Epoxy coating shall conform to AWWA C550.

B. External Surfaces:

External surfaces, except machined or bearing surfaces, shall be carefully prepared by the removal of dirt, grease and rust and shall be cleaned to the extent that the coating will effectively bond to all surfaces.

The exterior of each valve, except flange faces, shall be shop coated with one coat of polyamide anti-corrosive epoxy primer to a dry film thickness of not less than 3 mils or shall be prepared and coated in the same manner as the internal surfaces.

Flange faces shall be shop coated with a rust preventive compound.

10. CERTIFICATION:

The manufacturer shall furnish a sworn statement that the inspection and all of the specified tests have been completed and that the results comply with the requirements of these Standards. A copy of the Certification, including compliance with ANSI/NSF 61, shall be sent to Denver Water.

11. ACCEPTABLE MANUFACTURERS:

Clay-Val
Golden-Anderson
Ross
Singer
Ames
OCV
Bermad 700 Series Control Valve

*Material Specification – 10
Pressure Regulating Valves*