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INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

IAPMO GUIDE CRITERIA

FOR

MANUALLY OPERATED WATER SOFTENER BY-PASS VALVES

IGC 230-2006

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for manually operated water softener by-pass valves. It is intended to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users; to promote understanding regarding materials, manufacture, installation, and performance; and to identify manually operated water softener by-pass valves complying with this standard.
- 1.2** The provisions of this standard are not intended to prevent the use of any alternate material or method of construction, provided any such alternate meets the intent and requirements of this document and changes are amended to this standard.

2. SCOPE

- 2.1** This standard applies to manually operated water softener by-pass valves and covers general requirements, strength and performance tests for such products, in addition to method of markings and identification.

3. DEFINITION

- 3.1** **Water softener by-pass valve.** Valve used by water treatment devices that allows water to be directed through the water treatment device or internally through the valve. This valve allows water to be distributed throughout a residence even if the drinking water device is being serviced.

4. REFERENCED STANDARDS

- 4.1** All standards referenced herein shall be the current edition of those standards.

ASME A112.18.1/CSA B125.1
ASME B1.20.1

Plumbing Supply Fittings
Pipe Threads, General Purpose, Inch

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ASME B16.18
ASME B16.22

Cast Copper Alloy Solder Joint Pressure Fittings
Wrought Copper and Copper Alloy Solder Joint
Pressure Fittings

5. GENERAL REQUIREMENTS

- 5.1 Pressure and Temperature.** By-pass valves shall comply with the rated pressure and rated temperature requirements in Section 4.1.1 and 4.1.2 of ASME A112.18.1/CSA B125.1.
- 5.2 Threaded Connections.** Pipe threads shall comply with ASME B1.20.1.
- 5.3 Other Connections.** The lengths and diameters of solder-joint sockets shall be as specified in ASME B16.18 or B16.22 for connections to copper tubes. However, this requirement shall not apply to factory-assembled parts.
- 5.4 Toxicity.** By-pass valves shall comply with the toxicity requirements in Section 4.9 of ASME A112.18.1/CSA B125.1.

6. TESTING REQUIREMENTS

- 6.1 General.** By-pass valves shall comply with the preconditioning and installation testing requirements in Sections 5.1.1 and 5.1.2 of ASME A112.18.1/CSA B125.1.
- 6.2 Coating.** The coating on by-pass valves shall comply with the performance requirements and test methods in Sections 5.2.1 and 5.2.2 of ASME A112.18.1/CSA B125.1.
- 6.3 Adhesion Test.** The adhesion of the coating on by-pass valves shall comply with the performance requirements and test methods in Section 5.2.3 of ASME A112.18.1/CSA B125.1.
- 6.4 Pressure and Temperature Test.** By-pass valves shall comply with the performance requirements and test methods in Section 5.3.1 of ASME A112.18.1/CSA B125.1.
- 6.5 Burst Test.** By-pass valves shall comply with the performance requirements and test methods in Section 5.3.2 of ASME A112.18.1/CSA B125.1.
- 6.6 Flow Rate.** By-pass valves shall be tested in accordance with Section 5.4 of ASME A112.18.1/CSA B125.1 and are not applicable to the requirements in Table 1 and Sections 5.4.2.3(b) and (c) of ASME A112.18.1/CSA B125.1. The minimum and maximum flow rates of the valve shall comply with the requirements specified below in Table 1 of this standard.