

BEXAR METROPOLITAN WATER DISTRICT MATERIALS SPECIFICATIONS

Section 031

Cast Iron Gates Valve and Tapping Valves

031.1 Scope of Work

This specification covers iron-body bronze-mounted gate valves and tapping valves 4 inches and larger in size.

031.2 General Requirements

1. Except as otherwise modified or supplemented herein, AWWA Standard C500, or the latest revision thereof, "AWWA Standard for Gate Valves for Water and Sewerage Systems", shall govern the design, physical and chemical properties of component materials, construction, manufacture, and testing of all gate valves and tapping valves furnished under this specification.
2. In accordance with AWWA Standards, design working water pressure shall be 200 psig for valves 12-inch nominal pipe size and smaller and 150 psig for valves 16-inch nominal pipe size and larger.
3. Valves shall be of the double disc type with non-rising stems and parallel seats.
4. Valve body shall be of cast iron conforming to ASTM Specification A-126, Class B.
5. Valves shall be designed for installation in either a horizontal or vertical position and shall be furnished for mounting in a horizontal pipeline, unless otherwise specified.
6. Valve components of brass or bronze shall be manufactured to ASTM recognized alloy specifications of low-zinc content bronze, with a maximum zinc content of 16 percent as shown in AWWA Standard C500, Table A.
7. All mechanical joint valves shall be supplied with glands, bolts, and gaskets. Valve body bolts and nuts shall be zinc-plated, ASTM A165 Grade NS, steel grade ASTM A307 with dimensions conforming to ANSI B18.2.1.
8. All valves shall open right (clockwise), unless otherwise specified.
9. Valve ends shall be either flanged, mechanical joint, push-on joint or any combination thereof, as specified.
10. Stem seals shall be of the "O"-ring type for valves less than 20-inch nominal pipe size. "O"-ring or stuffing box may be used for valves 20-inch nominal pipe size and larger. Packing, if used in the stuffing box, will be non-asbestos, Teflon-lubricated fiber, TFE fluorocarbon low-density cord, a multi-lok braid acrylic yarn or packing material approved by BMWD. Packing materials shall be non-deteriorating and shall be non-contaminating. Stuffing box glands for valves 12-inch nominal pipe size and smaller shall be made of low-zinc content

bronze. Stuffing box glands for valves larger than 21-inch nominal pipe size shall be cast iron with bushings of low-zinc content bronze.

11. Valves 20-inch nominal pipe size and larger shall be geared. Gears shall be cut-tooth steel and gear cases shall be the totally-enclosed, weather tight type to enclose the gears, the stuffing box and the valve stem or the extended type, attached to the bonnet.
12. All valves 20-inch nominal pipe size and larger shall be provided with a by-pass; the by-pass and by-pass valve shall be in accordance with Table 8, AWWA C-500.
13. The number of turns to open or close the valve shall be consistent for each valve size for the manufacturer.
14. The exterior of the gate valve shall be coated in accordance with Section 3.22, AWWA C-500.
15. Tapping valves shall be mechanical joint with tapping flange on the other end. The tapping valves shall be furnished complete with glands, bolts and gaskets. The tapping valve shall have a clear, unobstructed waterway. The seat rings shall be of larger diameter to permit entry of full diameter tapping machine cutters. The valve end which mates with the tapping sleeve shall have an alignment lip to fit the recess in the tapping sleeve flange for proper alignment. The lip will be dimensioned in accordance with M.S.S. SP60 for valves 12-inch nominal pipe sized and smaller.
16. To be included on the qualified products list, the manufacturer shall provide an Affidavit of Compliance in accordance with Section 1.4, AWWA Standard C500, to include compliance with BMWD Specification. Records of all test performed in accordance with Section 2.2 and Section 5.1, AWWA Standard C500 will be provided. These records will be representative test results for section 2.2 and certificate of testing for Section 5.1. An affidavit of testing for the valve assembly and gearing as outlined in Section 3.1, AWWA Standard C500 (300 ft-lbs) will also be provided. A copy of the manufacturer's Quality Assurance Program will be submitted.

BMWD may, at no cost to the manufacturer, subject random valves to testing by an independent laboratory for compliance with these standards. Any visible defect of failure to meet the quality standard herein will be grounds for rejecting the entire order.

The attached qualified products list identifies specific manufacturers that are approved.

031.3 Approved Manufacturers List

Manufacturer
Clow Valve Co.
Mueller Co.

END OF SECTION