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**SAMPLE SPECIFICATION**

**Eccentric Plug Valves**

GA-517-SPEC Rev B

1.0 GENERAL

1.1 Manufacturer shall have a minimum of ten (10) years’ experience in the manufacture of quarter-turn, non-lubricated, rubber seated eccentric plug valves conforming to American Water Works Association (AWWA) Standard C517 (latest revision).

1.2 Manufacturer shall have an ISO-9001 quality management system certified by an accredited body.

1.3 When requested, manufacturer shall provide detailed product data and descriptive literature including dimensions, weight, capacity, pressure rating, materials of construction and cross-sectional drawings clearly illustrating the individual components.

2.0 PRODUCT

2.1 The plug valve shall fully conform to AWWA C517 (latest revision) and as described below.

2.2 Sizes ½-inch to 2½-inch shall have NPT connections. Larger sizes shall have integral flanged connections faced, drilled and of the thickness required by ANSI/ASME B16.1 Class 125 or mechanical joint connections conforming to ANSI/AWWA A21.11/C111, as shown on the plans or in the valve schedule.

2.3 Sizes 12-inch and smaller shall be rated for a working pressure of 175 PSI, 14-inch and larger sizes shall be rated for 150 PSI. Valves shall seal tightly in both directions up to the rated working pressure and be capable of operation after long periods of inactivity.

3.0 CONSTRUCTION

3.1 Plug valves sizes up to 24-inch shall have a round port for superior flow characteristics and low head loss.

a. The valve body and cover (bonnet) and plug shall be made from ductile iron conforming to ASTM A536 Grade 65-45-12.

b. Valves 3-inch and larger shall have a 95% pure nickel seat weld overlaid in the body. The “Seat End” shall be clearly identified. Sprayed, plated or removable body seats are not acceptable.

c. The plug shall be made from ASTM A536 ductile iron with a transfer molded and vulcanized Buna-N rubber coating, per ASTM D429.

d. Upper and lower shaft and thrust bearings shall be permanently lubricated 316 stainless steel. Valves shall be supplied with upper and lower grit excluders.

e. Valves shall have 316 stainless steel external fasteners, including packing gland studs and nuts.

3.2 Plug valves in sizes 30-inch and larger shall have a rectangular port with a minimum flow area equivalent to 80% of the inside area of the adjacent pipe.

a. The valve body and cover (bonnet) and plug shall be made from cast iron conforming to ASTM A126 Class B.

b. Valves shall have a 95% pure nickel seat weld overlaid in the body. The “Seat End” shall be clearly identified. Sprayed, plated or removable body seats are not acceptable.

c. The plug shall be made from ASTM A536 ductile iron with a transfer molded and vulcanized Buna-N rubber coating, per ASTM D429.

d. Upper and lower shaft bearings shall be PTFE coated 316 stainless steel that mate with 316SS upper and lower bushings. Valves shall be supplied with upper and lower grit excluders.

e. Buried service valves shall have 316 stainless steel external fasteners

3.3 The shaft packing in sizes 3-inch and larger valves shall be multiple Buna-N rings. Exposed valve shaft packing shall be self-adjusting and replaceable without valve disassembly or adjustable without removing the actuator. Buried service valves shall have the packing protected from foreign matter.

3.4 External and exposed internal ferrous surfaces of the valve shall be factory coated with NSF-61 certified epoxy

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4.0 ACTUATION

4.1 Sizes ½” to 2½” shall be lever operated. Larger size exposed valves shall have a worm gear actuator with a handwheel or 2” operating nut and a visual position indicator. When shown on the plans or in the valve schedule, sizes 3-inch to 8-inch may be lever operated. Buried service worm gear actuators shall be grease filled and sealed against water entry with a 2” operating nut.

4.2 When shown on the plans or in the valve schedule, plug valves shall be operated by an electric motor or pneumatic actuator as specified elsewhere and sized per AWWA C517.

5.0 OPTIONS *(Specifier to select any combination of options)*

5.1 Specify in lieu of 3.2 when required: Plug valves in sizes 24-inch and larger shall have a rectangular port with a minimum flow area equivalent to 100% of the inside area of the adjacent pipe.

5.2 Specify in lieu of 3.2.e when required: Valves shall have 316 stainless steel external fasteners

6.0 MANUFACTURER

5.1 Eccentric Plug Valves shall be GA Industries Figure 517 ECO-Centric® as manufactured by VAG USA, LLC Mars, PA USA.

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