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**SAMPLE SPECIFICATION**

**Eccentric Plug Valves**

GA-517-SPEC Rev C

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 and be capable of operation after long periods of inactivity.

3.0 CONSTRUCTION

3.1 Plug valves up to 20-inch size shall be 100% port full flow round port for low head loss and superior solids handling; valves 24-inch and larger shall have a rectangular port with a flow area equivalent to at least [80%] [100%] *(specifier to select)* of the inside area of the adjacent pipe.

a. The valve body and cover (bonnet) 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 bearings shall be permanently lubricated 316 stainless steel. Valves shall be supplied with upper and lower thrust bearings and grit excluders.

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

3.2 The shaft packing in sizes 3-inch and larger valves shall be multiple Buna-N rings. The shaft packing on exposed valves shall be self-adjusting and replaceable without valve disassembly or adjustable without removing the actuator. The shaft packing on buried service valves shall be in an enclosed bonnet to protect it from foreign matter.

3.3 The valve shall be epoxy coated on internal and external ferrous surfaces.

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.

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.