SECTION 40_XX_XX
SWING CHECK VALVES FOR POTABLE WATER OR SEWAGE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Swing Check Valves for Potable Water or Sewage

B. Related Sections:
   1. (provided by the engineer)
   2. (provided by the engineer)
   3. (provided by the engineer)

1.02 REFERENCES

A. ASME B16.42 "Conforms to Bolt Pattern and Drilling"
B. AWWA C508 “Swing-Check Valves for Waterworks Service”
C. NSF/ANSI 61 “Drinking Water System Components - Health Effects”
D. NSF/ANSI 372 “Drinking Water System Components - Lead Content”

1.03 SUBMITTALS

A. (provided by the engineer)

1.04 QUALITY ASSURANCE

A. Valves shall be warranted by the manufacturer for defects in materials and workmanship for a period of two years (24 months) from date of shipment.

PART 2 - PRODUCTS

2.01 GENERAL

A. (provided by the engineer)

2.02 SWING CHECK VALVES FOR WATER AND SEWAGE

A. Manufacturers: APCO CVS-6000 or pre-approved equal.
B. Design:
   1. Swing Check Valve shall be single body flanged design.
   2. General:
      a. Design Maximum Working Pressure: 200 psi (1380 kPa) on valve sizes 2-12” and 150 psi (1035 kPa) for 14” (350mm) and larger.
      b. Maximum Fluid Temperature: Dictated by elastomer selection
      c. Valve design to provide a full waterway flow through area
      d. Valve disc and disc arm connection shall be one-piece construction or a double clevis
      e. Valve shaft to be one-piece construction
      f. Valve design shall be of a top-entry configuration, permitting access to all internal components for inspection, maintenance, or replacement without requiring removal of the valve body from the pipeline.

C. Materials:
   1. Bodies: Ductile Iron ASTM A536
   2. Covers: Ductile Iron ASTM A536 or Steel ASTM A36
   3. Discs: Ductile Iron ASTM A536
   4. Body Seat Rings: 316 Stainless Steel A276/A351 or Aluminum Bronze ASTM B148
   5. Disc Seats: Acrylonitrile-Butadiene (NBR), Terpolymer of Ethylene, Propylene and A Diene (EPDM), Fluoro Rubber (FKM), Ultra-High Molecular Weight Polyethylene (UHMW), 316 Stainless Steel ASTM A276 or Aluminum Bronze ASTM B148
   6. Pivot Shafts: 303 Stainless Steel ASTM A582 or 304/316 Stainless Steel ASTM A276 or 17-4 PH ASTM 564, Type 630
   7. Bearings: Bronze ASTM B505/B584 for sizes 2-14” (50-350mm) and Bronze ASTM B150 for sizes 16-66” (400-1700mm)
   8. End Connections: Bolt Pattern and Drilling per ASME B16.42
   9. NSF: NSF/ANSI 372 certified lead-free and NSF/ANSI 61 certified for drinking water, when specified

D. Specifications for closure control devices:
   1. LW = Lever and Weight. The weight position shall be adjustable, enabling customization of closing characteristics to suit system operation conditions.
   2. LS = Lever and Spring. The spring mechanism shall be adjustable, enabling customization of closing characteristics to suit system operation conditions.
   3. AC = Lever and Weight with Air Cushion Cylinder. The flow control valve on the cylinder shall be adjustable, enabling air restriction through the cylinder to cushion the closing.
   4. OB = Lever and Weight with Oil Cushion. The oil cushion absorbs the impact of the lever and weight to prevent shaft bounce or vibration.
   5. OC = Oil Controlled, Side Mounted Cylinder. The OC is available on sizes 2-20” (50-500mm). It is a three-stage closure system, with each stage independently adjustable, incorporating an oil dashpot and timing valve arrangement for controlled operation.
   6. BMB = Oil Controlled, Bottom Mounted Buffer. The BMB is available on sizes 6-66” (150-1700mm). It engages during the final 10% of disc travel, with field-adjustable closure time with a micrometer type flow control valve and locking set screw.

E. Specifications for optional accessories:
   1. SEL22: A mechanical limit switch indicating when the disc is fully closed
   2. SEL30: An inductive proximity switch that transmits an electrical signal indicating when the disc is closed.

F. Testing:
   1. Each valve shall be shop tested as a complete assembly in accordance with AWWA C508.
   2. Certified test reports shall be available upon request.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install valves as specified in section (filled in by the engineer) and the manufacturer’s instructions.

B. (verbiage by engineer instructing how discharge piping should be installed)

3.01 COMMISSIONING

A. Field testing (verbiage by engineer)