SECTION 40_XX_XX
SLANTING DISC CHECK VALVES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Slanting Disc Check Valves

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 "Ductile Iron Pipe Flanges and Flanged Fittings"
B. AWWA C508 “Swing-Check Valves For Waterworks Service”
C. ASME B16.5 “Steel Pipe Flanges and Flanged Fittings”
D. ASME B16.34 “Valves – Flanged, Threaded, and Welding End”
E. ASME B16.1 “Gray Iron Pipe Flanges and Flanged Fittings”

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 SLANTING DISC CHECK VALVES

A. Manufacturers: APCO CSD or pre-approved equal
B. Design:
   1. Slanting Disc Check Valve shall be a two piece design, 6” & larger valves will have an access cover for internal inspection on both body halves. The cover shall be removable to allow attachment of an optional Bottom Mounted Buffer (BMB) or Top Mounted Oil Dashpot (TMD).
   2. General:
      a. Body halves shall be o-ring sealed and bolted together to capture the seat ring at a 55 degree angle. Body casting shall include disc stabilizers.
      b. Seat section area shall be 40% larger than valve inlet and outlet
      c. Disc shall have a “hydrofoil” design to create lift and provide low head loss

d. Body seat and disc ring shall be field replaceable without any special tools
e. Indicator shall be provided to show disc position

C. Materials:
1. Body Halves: Ductile Iron ASTM A536 Gr 65-45-12, Carbon Steel ASTM A216 Gr WCB, or Stainless Steel ASTM A351 CF8M
2. Seat Ring: Bronze ASTM B271 Alloy C92200 or Stainless Steel ASTM A351 CF8M
3. Disc: Ductile Iron ASTM A536, Carbon Steel ASTM A216 Gr WCB, or Stainless Steel ASTM A351 CF8M
4. Disc Ring: Bronze ASTM B271 Alloy C92200 or Stainless Steel ASTM A351 CF8M
5. Pivot Pin: 303 Stainless Steel ASTM A562
6. Pivot Pin Bushing: 304 Stainless Steel ASTM A276

D. Specifications for closure control devices:
1. BMB = Bottom Mounted Buffer. The buffer permits free opening but positive non-slam closure of the disc. The buffer shall make contact with the disc during the final 10% of closure to control the disc until shut-off in a manner to prevent slam and water hammer.
a. Buffer rod shall be 303 Stainless Steel ASTM A582
b. Oil reservoir shall be 316 Stainless Steel ASTM A240
i. Hydraulic hoses shall be S.A.E. certified
c. Color-coded micrometer type control valve shall control final closure adjustment
i. Control valve shall have a locking set screw to secure final setting
2. TMD = Top Mounted Oil Dashpot. The dashpot permits controlled opening and non-slam closing to minimize surge and water hammer. The dashpot must be a self-contained oil system, separate and independent from the pipeline media.
a. An internal adjustable cushion chamber in the head of the cylinder shall be provided for slower speed during the last few degrees of disc closing.
b. Oil reservoir shall be 316 Stainless Steel ASTM A240
i. Hydraulic hoses shall be S.A.E. certified
c. Color-coded micrometer type control valve shall independently adjust the opening and closing speeds

E. Testing:
1. 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)