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**SECTION 40\_XX\_XX**  
**AIR/VACUUM VALVES FOR SEWAGE SERVICE**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Air/Vacuum valves for sewage service
  
- 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. ASME B16.5 "Steel 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 AIR/VACUUM VALVES FOR SEWAGE SERVICE**

- A. Manufacturers: APCO ASV or pre-approved equal
- B. Design:
  - 1. Sewage Air/Vacuum Valve shall have an optimized body height with two floats connected by a common stem to maintain an air gap between the bottom concave float and top shut-off float
  - 2. General:
    - a. Valve shall automatically provide the release of large volumes of air during pipeline filling. The valve will remain closed and will not reopen when the system is full and under positive pressure. The valve will open under negative pressure to admit large volumes of air during pipeline draining to prevent a vacuum collapse of the pipeline
    - b. Valve internals shall be easily removed through the top cover without removing the valve from the line.

- c. Baffle shall be fitted with a guide bushing and act to protect the shut-off float from direct airflow. The baffle shall retain the resilient seat without distortion and shall provide drop tight shut-off.
    - d. An air gap shall prevent waste solids from fouling or clogging the top shut-off float
- C. Materials:
  - 1. Body: Ductile Iron ASTM A536 or 316 Stainless Steel ASTM A351/A743 CF8M
  - 2. Cover: Ductile Iron ASTM A536 or 316 Stainless Steel ASTM A351/A743 CF8M
  - 3. Upper & Lower Floats: 316 Stainless Steel
  - 4. Float Stem: 316 Stainless Steel
  - 5. Seat: Acrylonitrile-Butadiene (NBR), Terpolymer of Ethylene, Propylene and A Diene (EPDM) or Fluoro Rubber (FKM)
  - 6. Baffle & Float Guide: 316 Stainless Steel
- D. Specifications for optional accessories:
  - 1. DAT: A double acting throttling device fitted on the discharge orifice to provide both throttling air out and full flow air in.
  - 2. MRC: A mushroom cap installed in the threaded outlet for discharge protection
  - 3. BFK: Blackflush kit includes shut-off valves, hose, and quick disconnect couplings
- 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)