SECTION 230523 - GENERAL DUTY VALVES FOR HVAC PIPING

PART 1-GENERAL

1.1 SECTION INCLUDES

A. Valves

1.2 SUBMITTALS

A. Submit shop drawings and product data per applicable Division I Specifications.

B. Shop drawings shall include product data noting type materials, sizes, and dimensions.

1.3 QUALITY ASSURANCE

A. The following standards apply.

1. ANSI B16.10, MSS SP-67-90 Butterfly Valves.

2. MSS SP-78-92 Cast Iron Plug Valves Flanged and Threaded.

3. MSS SP-80-87 Bronze Globe, and Check Valves.

4. N/A

5. MSS SP-110-92 Ball Valves Threaded, Socket-Welded, Solder Joint, Grooved and Flared Ends.

PART 2-PRODUCTS

2.1 COMPONENTS

A. Ball Valves

1. Manufacturers:

a. Hammond

b. Apollo

c. Milwaukee

d. Victaulic

2. Bronze body and bonnet, two-piece construction, chrome-plated ball, standard port for 2-1/2 - inch NPS and smaller and full port for 3-inch NPS valves, Class 150, with stem extensions for insulated piping and memory stops.

3. Ductile-iron grooved end body, two-piece construction, chrome-plated carbon steel ball and stem, standard port, TFE seats and Fluoro elastomer seals, lever handle or gear operator, 800 psig CWP. Victaulic Series 726.

B. Plug Valves

1. Manufacturers:

a. Hammond

b. Apollo

c. Milwaukee

d. Victaulic

2. Cast-iron body and bonnet, cast-iron plug, 175 psig, with lever operator.

3. This valve is only used for gas systems.

4. Grooved end eccentric type plug valves with ductile iron body and elastomer coated ductile iron plug, 175 psig with lever handle or gear operator. This valve shall only be used for water systems with a maximum operating temperature of 230 degrees F. Victaulic Series 377.

C. Globe Valves

1. Manufacturers:

a. Hammond

b. Apollo

c. Milwaukee

d. Victaulic

2. 2-1/2 Inch NPS and Smaller: Cast-bronze body and bonnet, Class 125 or 150, with threaded or soldered connections.

3. 3 Inch NPS and Larger: Cast-bronze body and bonnet, Class 125, outside screw and yoke, with flanged connections.

D. Butterfly Valves: Cast-iron body and bonnet, Class 250, 200 psig working pressure, stainless-steel stem; lug, or grooved style connections. (For HVAC systems only).

1. Manufacturers:

a. Hammond

b. Apollo

c. Milwaukee

d. Victaulic

2. Disc Type: Aluminum bronze

3. Grooved end butterfly valve with ductile iron body and nickel-coated ductile iron disc, 300 psig working pressure, offset disc to provide continuous 360 degree seating. Victaulic Vic – 300 Master Seal.

4. Operator:

a. Standard lever handle.

b. Standard lever handle with memory stop.

c. Lever handle with latch lock.

d. Gear with position indicator.

e. Gear with position indicator and chain wheel.

f. Chain wheel

E. Check Valves

1. Manufacturers:

a. Hammond

b. Apollo

c. Milwaukee

d. Victaulic

2. Swing Type, 2-1/2 Inch NPS and Smaller: Bronze body, Class 125 or 150, horizontal swing, with threaded or soldered connections.

3. Swing Type, 3 Inch NPS and Larger: Cast-iron body, Class 125, horizontal swing, with flanged or grooved connections.

a. Wafer Type: Class 125, cast-iron body, bronze disc, with stainless-steel pins and springs.

b. Lift Type: Class 125, bronze body and cap, horizontal or vertical pattern, bronze disc, with threaded or soldered connections.

c. Grooved End Swing Type: 300 psig, ductile iron body, horizontal swing, 316 stainless steel clapper with EPDM bonded bumper. Victaulic Series 712.

d. Grooved End Spring-Loaded Type: 300 psig, ductile iron body aluminum bronze or elastomer coated ductile iron disc, stainless steel spring and shaft,

PPS coated or welded-in nickel seat. Victaulic Series 716.

PART 3-EXECUTION

3.1 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel or groove plain end ferrous pipe.

B. Remove scale and dirt on inside and outside before assembly.

C. Prepare piping connections to equipment with flanges, Victaulic couplings, or unions.

D. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.

E. After completion, fill, clean, and treat systems.

3.2 INSTALLATION

A. Install all threaded valves with a union joint on the downstream side of the valve.

B. Provide valves to isolate all equipment and coils on the supply and return pipes.

C. Provide valves of like material as the piping systems.

D. Provide dielectric waterway connections between all dissimilar metals.

E. Install valves with stems upright or horizontal not inverted.

F. Grooved end valves shall be installed in accordance with the manufacturer's (Victaulic) guidelines and recommendations. To assure uniformity and compatibility all grooved end valves and adjoining couplings shall be supplied by Victaulic. Grooved end shall be clean and free from indentations and projections. A Victaulic factory trained field representative shall provide on-site training to contractor's field personnel in the installation of grooved end valves. Factory trained representative shall periodically review the product installation. Contractor shall remove and replace any improperly installed products.

END OF SECTION 230523