

SECTION 230523

VALVES

PART 1 GENERAL

1.01 ABBREVIATIONS

- A. IBBM: Iron body, bronze mounted.
- B. OS&Y: Outside screw and yoke.
- C. WOG: Water, oil, gas.



1.02 SUBMITTALS

- A. Product Data: Manufacturer's catalog sheets and specifications for each valve type.
- B. Valve Schedule: List type of valve, manufacturer's model number, and size for each service application.

1.03 MAINTENANCE

- A. Special Tools:
 - 1. One wrench for each type and size wrench operated plug valve.
 - 2. Two insert changing tools, and one spare insert for each self contained thermostatic radiator control valve.

PART 2 PRODUCTS

2.01 VALVES - GENERAL

- A. The intent of this work is to replace the existing valves with new stainless steel valves. The new valves shall match the existing in size, function and pressure class.
- B. Valve Standardization: Valves from one or more manufacturers may be used, however valves supplied for each specific valve type shall be the product of one manufacturer.
- C. Valves shall be first quality, free from all imperfections and defects, with body markings indicating manufacturer and rating.
- D. Valve parts of same manufacturer, size and type shall be interchangeable.
- E. Manually operated gate, globe and angle valves shall be of rising stem type, unless otherwise specified.

- F. Valves which use packing shall be capable of being packed when wide open and under full working pressure.
- G. Size valves the same size as the piping in which they are installed, unless specified otherwise.

2.02 GATE VALVES

All sizes: Body class ASME 150, body type 316 stainless steel, ASTM A351 CFBM, disc 316 stainless steel ASTM A351 CFBM, bonnet bolt 304 stainless steel, bonnet nut 304 stainless steel, bonnet 316 stainless steel ASTM A351 CFBM, Hinge pin 304 stainless steel, Eye bolt 304 stainless steel, gland 316 stainless steel ASTM A351 CFBM, eye nut 304 stainless steel, hand wheel A47 / A536, nut brass, stem A182-F316, name plate 304 stainless steel, spring brass, yoke sleeve brass, gland packing PTFE / graphite, packing PTFE, gasket PTFE / Grafoil 316. Provide Sharpe series 35114 or approved equal for flanged gate valves. Acceptable manufacturers: Crane, Flowseal, Nibco.

¼ to 2 inch Threaded or Socket Welded: Body class ASME 800, body type F316 stainless steel, valve trim 316 stainless steel Provide Vogt series 13401 or approved equal for threaded or socket welded gate valves. Acceptable manufacturers: Crane, Flowseal, Nibco, Velan.

2.03 CHECK VALVES

All sizes: Body class ASTM 150, body 316 stainless steel CFBM, disc 316L stainless steel CFBM, nut 316 stainless steel, arm hinge 316 stainless steel hinge pin 316 stainless steel, gasket PTFE, washer 304 stainless steel, bolt 304 stainless steel, cover 316 stainless steel-CFBM, bolt 304 stainless steel. Provide Sharpe Series 25116 or approved equal. . Acceptable manufacturers: Crane, Flowseal, Nibco

2.04 BUTTERFLY VALVES

All sizes: Body class ASME 150, body type lugged, shaft design ASME 150, body type 316 stainless steel, ASTM A351 CFBM,, disc material 316L stainless steel, shaft material 316L stainless steel, seat material / O-ring TFE / Viton, Seat leakage – MSS-SP-67, Type I - Tight shutoff requirements at rated pressure at ambient temperature, packing material TFE, bearing material 316 stainless steel. Provide Flowseal High Performance butterfly valve or approved equal. Acceptable manufacturers: Crane, Flowseal, Nibco

2.05 GLOBE VALVES

All sizes: Body class ASTM 150, body type 316 stainless steel, ASTM A351 CFBM,, seat A105 and STL6, Disc 410 stainless steel, thrust plate 410 stainless steel, disc cover 410 stainless steel, stem A182 F6a, gasket 304 stainless steel and graphite, bonnet carbon steel ASTM A216-WCB, bolt B7 steel A193, nut carbon steel, gland flange carbon steel, eye bolt B7 steel A193, eye nut 2H steel A193, stem nut D-1, gasket 410 stainless steel, nut carbon steel, hand wheel ductile iron, screw carbon steel gland 410 stainless steel, packing 304 stainless

steel and graphite, packing flexible graphite, back seat 410 stainless steel, rivet 304 stainless steel, name plate 304 stainless steel Provide Sharpe series 35116 or approved equal. Acceptable manufacturers: Crane, Flowseal Nibco.

2.06 BALL VALVES

All sizes: Body class ASTM 150, body type 316 stainless steel, ASTM A351 CF8M,, seat MPTFE, Ball Disc 316 stainless steel, thrust washer RPTFE, body seal 316 stainless steel and graphite, 410 stainless steel, stem 316 SS, gasket 304 stainless steel and graphite, packing PTFE, stem bushing RPTFE, Packing Flange CF8M 316SS, Gland follower SS304 Bonnet studs/cap screws B8M Cl.2, Bonnet nuts 8M, Handle SS 304/Malleable Iron, Handle Nut SS/Cadmium-plated CS, Coil spring 302 SS. Provide Velan series TE 150 MemorySeal Top-Entry Full Port or approved equal. Acceptable manufacturers: Crane, Flowseal Nibco.

PART 3 EXECUTION

3.01 INSTALLATION

- A. General: Install valves at locations noted on the drawings or as otherwise specified.

END OF SECTION