

WEST NAVARRE INTERMEDIATE SCHOOL
5 CLASSROOM ADDITION

SECTION 15111 - GENERAL-DUTY VALVES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. SECTION INCLUDES:

1. BRASS BALL VALVES.
2. BRONZE BALL VALVES.
3. BRONZE SWING CHECK VALVES.
4. BRONZE GATE VALVES.
5. BRONZE GLOBE VALVES.

1.2 ACTION SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF VALVE INDICATED.

1.3 QUALITY ASSURANCE

- A. ASME COMPLIANCE: ASME B16.10 AND ASME B16.34 FOR FERROUS VALVE DIMENSIONS AND DESIGN CRITERIA.**
- B. NSF COMPLIANCE: NSF 61 FOR VALVE MATERIALS FOR POTABLE-WATER SERVICE.**

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR VALVES

- A. REFER TO VALVE SCHEDULE ARTICLES FOR APPLICATIONS OF VALVES.**
- B. VALVE PRESSURE AND TEMPERATURE RATINGS: NOT LESS THAN INDICATED AND AS REQUIRED FOR SYSTEM PRESSURES AND TEMPERATURES.**
- C. VALVE SIZES: SAME AS UPSTREAM PIPING UNLESS OTHERWISE INDICATED.**
- D. VALVE ACTUATOR TYPES:**
1. GEAR ACTUATOR: FOR QUARTER-TURN VALVES NPS 8 AND LARGER.
 2. HANDWHEEL: FOR VALVES OTHER THAN QUARTER-TURN TYPES.
 3. HANDLEVER: FOR QUARTER-TURN VALVES NPS 6 AND SMALLER EXCEPT PLUG VALVES.
- E. VALVES IN INSULATED PIPING: WITH 2-INCH STEM EXTENSIONS AND THE FOLLOWING FEATURES:**
1. GATE VALVES: WITH RISING STEM.

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2. BALL VALVES: WITH EXTENDED OPERATING HANDLE OF NON-THERMAL-CONDUCTIVE MATERIAL, AND PROTECTIVE SLEEVE THAT ALLOWS OPERATION OF VALVE WITHOUT BREAKING THE VAPOR SEAL OR DISTURBING INSULATION.
3. BUTTERFLY VALVES: WITH EXTENDED NECK.

F. VALVE-END CONNECTIONS:

1. FLANGED: WITH FLANGES ACCORDING TO ASME B16.1 FOR IRON VALVES.
2. SOLDER JOINT: WITH SOCKETS ACCORDING TO ASME B16.18.
3. THREADED: WITH THREADS ACCORDING TO ASME B1.20.1.

2.2 BRASS BALL VALVES

A. TWO-PIECE, FULL-PORT, BRASS BALL VALVES WITH BRASS TRIM:

1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
 - A. CRANE CO.; CRANE VALVE GROUP.
 - B. HAMMOND VALVE.
 - C. JOMAR INTERNATIONAL, LTD.
 - D. KITZ CORPORATION.
 - E. MILWAUKEE VALVE COMPANY.
 - F. NIBCO INC.
 - G. RED-WHITE VALVE CORPORATION.
2. DESCRIPTION:
 - A. STANDARD: MSS SP-110.
 - B. SWP RATING: 150 PSIG.
 - C. CWP RATING: 600 PSIG.
 - D. BODY DESIGN: TWO PIECE.
 - E. BODY MATERIAL: FORGED BRASS.
 - F. ENDS: THREADED.
 - G. SEATS: PTFE OR TFE.
 - H. STEM: BRASS.
 - I. BALL: CHROME-PLATED BRASS.
 - J. PORT: FULL.

2.3 BRONZE BALL VALVES

A. TWO-PIECE, FULL-PORT, BRONZE BALL VALVES WITH BRONZE TRIM:

1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
 - A. AMERICAN VALVE, INC.
 - B. CONBRACO INDUSTRIES, INC.; APOLLO VALVES.
 - C. CRANE CO.; CRANE VALVE GROUP; CRANE VALVES.
 - D. HAMMOND VALVE.
 - E. LANCE VALVES; A DIVISION OF ADVANCED THERMAL SYSTEMS, INC.
 - F. LEGEND VALVE.
 - G. MILWAUKEE VALVE COMPANY.

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- H. NIBCO INC.
- I. RED-WHITE VALVE CORPORATION.
- J. WATTS REGULATOR CO.; A DIVISION OF WATTS WATER TECHNOLOGIES, INC.

2. DESCRIPTION:

- A. STANDARD: MSS SP-110.
- B. SWP RATING: 150 PSIG.
- C. CWP RATING: 600 PSIG.
- D. BODY DESIGN: TWO PIECE.
- E. BODY MATERIAL: BRONZE.
- F. ENDS: THREADED.
- G. SEATS: PTFE OR TFE.
- H. STEM: BRONZE.
- I. BALL: CHROME-PLATED BRASS.
- J. PORT: FULL.

2.4 BRONZE SWING CHECK VALVES

A. CLASS 125, BRONZE SWING CHECK VALVES WITH NONMETALLIC DISC:

1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

- A. CRANE CO.; CRANE VALVE GROUP; CRANE VALVES.
- B. CRANE CO.; CRANE VALVE GROUP; JENKINS VALVES.
- C. CRANE CO.; CRANE VALVE GROUP; STOCKHAM DIVISION.
- D. HAMMOND VALVE.
- E. KITZ CORPORATION.
- F. MILWAUKEE VALVE COMPANY.
- G. NIBCO INC.
- H. RED-WHITE VALVE CORPORATION.
- I. WATTS REGULATOR CO.; A DIVISION OF WATTS WATER TECHNOLOGIES, INC.

2. DESCRIPTION:

- A. STANDARD: MSS SP-80, TYPE 4.
- B. CWP RATING: 200 PSIG.
- C. BODY DESIGN: HORIZONTAL FLOW.
- D. BODY MATERIAL: ASTM B 62, BRONZE.
- E. ENDS: THREADED.
- F. DISC: PTFE OR TFE.

2.5 BRONZE GATE VALVES

A. CLASS 125, NRS BRONZE GATE VALVES:

1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

- A. AMERICAN VALVE, INC.

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- B. CRANE CO.; CRANE VALVE GROUP; CRANE VALVES.
- C. CRANE CO.; CRANE VALVE GROUP; JENKINS VALVES.
- D. CRANE CO.; CRANE VALVE GROUP; STOCKHAM DIVISION.
- E. HAMMOND VALVE.
- F. KITZ CORPORATION.
- G. MILWAUKEE VALVE COMPANY.
- H. NIBCO INC.
- I. POWELL VALVES.
- J. RED-WHITE VALVE CORPORATION.
- K. WATTS REGULATOR CO.; A DIVISION OF WATTS WATER TECHNOLOGIES, INC.

2. DESCRIPTION:

- A. STANDARD: MSS SP-80, TYPE 1.
- B. CWP RATING: 200 PSIG.
- C. BODY MATERIAL: ASTM B 62, BRONZE WITH INTEGRAL SEAT AND SCREW-IN BONNET.
- D. ENDS: THREADED[OR SOLDER JOINT].
- E. STEM: BRONZE.
- F. DISC: SOLID WEDGE; BRONZE.
- G. PACKING: ASBESTOS FREE.
- H. HANDWHEEL: MALLEABLE IRON.

B. CLASS 125, RS BRONZE GATE VALVES:

1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

- A. AMERICAN VALVE, INC.
- B. CRANE CO.; CRANE VALVE GROUP; CRANE VALVES.
- C. CRANE CO.; CRANE VALVE GROUP; JENKINS VALVES.
- D. CRANE CO.; CRANE VALVE GROUP; STOCKHAM DIVISION.
- E. HAMMOND VALVE.
- F. KITZ CORPORATION.
- G. MILWAUKEE VALVE COMPANY.
- H. NIBCO INC.
- I. POWELL VALVES.
- J. WATTS REGULATOR CO.; A DIVISION OF WATTS WATER TECHNOLOGIES, INC.

2. DESCRIPTION:

- A. STANDARD: MSS SP-80, TYPE 2.
- B. CWP RATING: 200 PSIG.
- C. BODY MATERIAL: ASTM B 62, BRONZE WITH INTEGRAL SEAT AND SCREW-IN BONNET.
- D. ENDS: THREADED OR SOLDER JOINT.
- E. STEM: BRONZE.
- F. DISC: SOLID WEDGE; BRONZE.
- G. PACKING: ASBESTOS FREE.
- H. HANDWHEEL: MALLEABLE IRON.

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2.6 BRONZE GLOBE VALVES

A. CLASS 125, BRONZE GLOBE VALVES WITH NONMETALLIC DISC:

1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
 - A. CRANE CO.; CRANE VALVE GROUP; CRANE VALVES.
 - B. CRANE CO.; CRANE VALVE GROUP; STOCKHAM DIVISION.
 - C. NIBCO INC.
 - D. RED-WHITE VALVE CORPORATION.
2. DESCRIPTION:
 - A. STANDARD: MSS SP-80, TYPE 2.
 - B. CWP RATING: 200 PSIG.
 - C. BODY MATERIAL: ASTM B 62, BRONZE WITH INTEGRAL SEAT AND SCREW-IN BONNET.
 - D. ENDS: THREADED OR SOLDER JOINT.
 - E. STEM: BRONZE.
 - F. DISC: PTFE OR TFE.
 - G. PACKING: ASBESTOS FREE.
 - H. HANDWHEEL: MALLEABLE IRON.

PART 3 - EXECUTION

3.1 VALVE INSTALLATION

- A. INSTALL VALVES WITH UNIONS OR FLANGES AT EACH PIECE OF EQUIPMENT ARRANGED TO ALLOW SERVICE, MAINTENANCE, AND EQUIPMENT REMOVAL WITHOUT SYSTEM SHUTDOWN.
- B. LOCATE VALVES FOR EASY ACCESS AND PROVIDE SEPARATE SUPPORT WHERE NECESSARY.
- C. INSTALL VALVES IN HORIZONTAL PIPING WITH STEM AT OR ABOVE CENTER OF PIPE.
- D. INSTALL VALVES IN POSITION TO ALLOW FULL STEM MOVEMENT.

3.2 ADJUSTING

- A. ADJUST OR REPLACE VALVE PACKING AFTER PIPING SYSTEMS HAVE BEEN TESTED AND PUT INTO SERVICE BUT BEFORE FINAL ADJUSTING AND BALANCING. REPLACE VALVES IF PERSISTENT LEAKING OCCURS.

3.3 GENERAL REQUIREMENTS FOR VALVE APPLICATIONS

- A. IF VALVE APPLICATIONS ARE NOT INDICATED, USE THE FOLLOWING:
 1. SHUTOFF SERVICE: BALL VALVES.
 2. THROTTLING SERVICE: GLOBE OR BALL VALVES.

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- B. IF VALVES WITH SPECIFIED SWP CLASSES OR CWP RATINGS ARE NOT AVAILABLE, THE SAME TYPES OF VALVES WITH HIGHER SWP CLASS OR CWP RATINGS MAY BE SUBSTITUTED.
- C. SELECT VALVES, EXCEPT WAFER TYPES, WITH THE FOLLOWING END CONNECTIONS:
 - 1. FOR COPPER TUBING, NPS 2 AND SMALLER: THREADED ENDS EXCEPT WHERE SOLDER-JOINT VALVE-END OPTION IS INDICATED IN VALVE SCHEDULES BELOW.
 - 2. FOR COPPER TUBING, NPS 2-1/2 TO NPS 4: FLANGED ENDS EXCEPT WHERE THREADED VALVE-END OPTION IS INDICATED IN VALVE SCHEDULES BELOW.
 - 3. FOR COPPER TUBING, NPS 5 AND LARGER: FLANGED ENDS.

3.4 DOMESTIC, HOT- AND COLD-WATER VALVE SCHEDULE

- A. PIPE NPS 2 AND SMALLER:
 - 1. BRONZE AND BRASS VALVES: MAY BE PROVIDED WITH SOLDER-JOINT ENDS INSTEAD OF THREADED ENDS.
 - 2. BRONZE ANGLE VALVES: CLASS 125, NONMETALLIC DISC.
 - 3. BALL VALVES: TWO PIECE, FULL PORT, BRASS OR BRONZE WITH BRASS OR BRONZE TRIM.
 - 4. BRONZE SWING CHECK VALVES: CLASS 125, DISC.

END OF SECTION 15111