

**SECTION 22 05 19**  
**METERS AND GAGES FOR PLUMBING PIPING**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

This section describes the requirements for pressure gages and thermometers.

**1.2 RELATED WORK**

Section 22 05 11, COMMON WORK RESULTS FOR PLUMBING.

**1.3 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, and SAMPLES.
- B. Manufacturer's Literature and Data:  
Pressure Gages and Thermometers:
  - 1. Catalog cuts showing design, construction, dimensions of gages and accessories.
  - 2. Accuracy.
  - 3. Pressure and temperature limitations of gages and accessories.
  - 4. List of scale ranges to be provided.

**1.4 APPLICABLE PUBLICATIONS**

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American National Standards Institute (ANSI):  
American Society of Mechanical Engineers (ASME): (Copyrighted Society)  
B40.1-05.....Gauges-Pressure Indicating Dial Type-Elastic

**PART 2 - PRODUCTS**

**2.1 PRESSURE GAGES - PIPE MOUNTED**

- A. General: Pressure Gage locations are indicated on the drawings.
- B. Construction:
  - 1. ANSI B40.1, stainless steel case 114 mm (4-1/2 inches) diameter, bottom connected, identity labeled.
  - 2. Range: 0 psi gauge and select top end range so operating pressure is in the middle of the gauge.
  - 3. Case/Dial: Stainless steel back with glass case. The dial face shall be non-reflective aluminum with permanently etched scale markings graduated in psi.
  - 4. Form: Bourdon tube style, dial type, glycerin filled.

5. The accuracy shall be plus or minus 1 percent of middle half of scale range.

**2.2 THERMOMETERS - PIPE MOUNTED**

- A. General: Thermometer locations are indicated on the drawings.
- B. Construction:
  1. Industrial type, 3" minimum dial, identity labeled.
  2. Range: 0 to 250F.
  3. Case/Dial: Stainless steel back with glass face.
  4. Form: Bimetal, dial type, with hermetically sealed case to prevent fogging.
  5. Accuracy: Plus or minus 1 percent of scale range.

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Direct mounted Pressure Gages and Thermometers shall be installed in piping tees with gage located on pipe at the most readable position.
- B. Ball Valves shall be installed in piping for each Pressure Gage and Thermometer; provide snubber on Pressure Gages.
- C. Pressure Gages and Thermometers shall be installed where indicated on the drawings.

- - - E N D - - -