SECTION 22 05 19

METERS AND GAGES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section describes the requirements for water meters and pressure gages.

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:

1. Pressure Gages.
2. Product certificates for each type of meter and gauge

C. Shop Drawings shall include the following:

1. One line, wiring and terminal diagrams including terminals identified, protocol or communication modules, and Ethernet connections.

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

C. American Water Works Association (AWWA):

C700-07 (R 2003).....Standard for Cold Water Meters, Displacement Type, Bronze Main Case

C701-07.....Cold Water Meters-Turbine Type, for Customer Service AWWA/ ANSI

C702-01.....Cold water meters – Compound Type

D. International Code Council (ICC):

IPC-06.....(2007 Supplement) International Plumbing Code

1.5 AS-BUILT DOCUMENTATION

A. Four sets of manufacturer’s literature and data updated to include submittal review comments and any equipment substitutions.

PART 2 – PRODUCTS

2.1 PRESSURE GAGES FOR WATER AND SEWAGE USAGE

A. ANSI B40.1 all metal case 114 mm (4-1/2 inches) diameter, bottom connected throughout, graduated as required for service, and identity labeled. Range shall be 0 to 1375 kPa (0 to 200 psi) gauge.

B. The pressure element assembly shall be bourdon tube. The mechanical movement shall be lined to pressure element and connected to pointer.

C. The dial shall be non-reflective aluminum with permanently etched scale markings graduated in kPa and psi.

D. The pointer shall be dark colored metal.

E. The window shall be glass.

F. The ring shall be brass or stainless steel.

G. The accuracy shall be grade A, plus or minus 1 percent of middle half of scale range.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Direct mounted pressure gages shall be installed in piping tees with pressure gage located on pipe at the most readable position.

B. Valves and snubbers shall be installed in piping for each pressure gage.

C. Test plugs shall be installed on the inlet and outlet pipes all heat exchangers or water heaters serving more than one plumbing fixture.

D. Pressure gages shall be installed where indicated on the drawings and at the following locations:

1. Building water service entrance into building
2. Inlet and outlet of each pressure reducing valve
3. Suction and discharge of each domestic water pump or re-circulating hot water return pump.

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