1. GENERAL

1.1 Scope

.1 Provide meters, gauges, and taps where shown on Drawings and/or specified herein.

.2 Submit Shop Drawings of proposed products to the Contract Administrator for review.

.3 Submit data sheets on thermometers and pressure gauges indicating service, and temperature or pressure ranges to the Contract Administrator for review.

2. PRODUCTS

2.1 Thermometers

.1 Dial Thermometers: 75 mm diameter dial in drawn steel case, bimetallic helix actuated, brass separable socket of flange and bushing, glass cover, adjustable pointer.

.2 Mercury Thermometer: Red reading mercury filled, 2° graduations, aluminum case, 230 mm (9 inch) scale, straight shank, separable socket, adjustable angle.

2.2 Thermometer Well

.1 Stainless steel suitable for stem type thermometer with gasket and cap except in potable water and open systems, in which case brass type shall be used.

2.3 Pressure Gauges

.1 100 mm diameter, drawn steel case, phosphor bronze bourdon tube, brass movement, extruded brass socket, 1% midscale accuracy, front calibration adjustment, black figures on white background. Provide pulsating damper and pet cock for water service.

2.4 Pressure Gauge Taps

.1 Brass needle valve.

2.5 Static Pressure Gauges

.1 Dial Gauge: 100 mm dial, diaphragm actuated, suitable for positive, negative or differential pressure measurement. Accuracy within +2% of full scale, complete with static pressure tips and mounting accessories.

.2 Inclined Vertical Manometer: Molded plastic manometer, accuracy within +3% of full scale, suitable for positive, negative or differential pressure measurement, complete with static pressure tips and mounting accuracy.

3. EXECUTION

3.1 Installation

.1 Provide one pressure gauge per pump installing taps before strainers and on suction and discharge of pump. Pipe to gauge.

.2 Select gauges so that normal operating point is approximately mid-point of instrument range.

.3 On pipes 65 mm and smaller, place well in tee used in lieu of an elbow to accommodate well.

3.2 Meters and Gauges Installation Schedule

.1 Pressure Gauges:

.1 Pumps

.2 Expansion tanks

.3 and where shown on Drawings

.2 Pressure Gauge Taps:

.1 Both sides of two-way control valves

.2 All lines to three-way control valves

.3 Major coils, inlet and outlet

.4 Heat exchangers, inlet and outlet, source and load side

.5 and where shown on Drawings

.3 Thermometers:

.1 Boiler, inlet and outlet

.2 Heat exchangers, inlet and outlet load and source side

.3 Heating water zone supply and return mains

.4 Heating and cooling coils, inlet and outlet

.5 and where shown on Drawings

.4 Thermometer Wells Only:

.1 All lines to three-way control valves

.2 and where shown on Drawings

.5 Static Pressure Gauges:

.1 Across filter banks

.2 and where shown on Drawings

.6 Static Pressure Taps:

.1 Across heating and cooling coils

.2 and where shown on Drawings

END OF SECTION