

OKLAHOMA STATE UNIVERSITY - BUILDING DESIGN STANDARDS

PART 1 GENERAL

1.01 Intent of Document

- A. The information included in this section is intended to identify the SPECIFIC ITEMS required by Oklahoma State University (OSU) in the design and construction of facilities on the campus. Items of "normal, code, industry or standard construction practice" are not included in this section.

PART 2 PRODUCTS

2.01 Product Selection

- A. Fireglass Enclosure: STARLIN fiberglass enclosure catalogue #J1412RPL or approved equal. Approval of equal products is by OSU Architectural & Engineering Inspection Services **ONLY**. Enclosures can be supplied by the OSU Utilities Department upon request.
- B. Shielded Cable with Ground Wire: BELDEN beldfoil® shielded cable. Part# 530IFE-008. (UL) Type CMR 75C or approved equal.

PART 3 EXECUTION

3.01 Chilled Water Metering Installation Requirements

- A. Contractor shall perform the following:
 - 1. Installation of a 12"h X 14"w X 6"d fiberglass enclosure.
 - a. Enclosure should be spray tight, with piano style hinge and at least two (2) latches opposite the hinge.
 - b. Enclosure shall be mounted in a horizontal orientation with the latches on top, so that the door opens downward.
 - c. Top of the enclosure shall be between 5'-6" and 6'-0" above finished floor level and out of the service area or walkway.
 - 2. Installation of a dedicated 120VAC circuit. (5 ampere min, 15 ampere max)
 - a. Circuit shall be pulled from nearest 120 VAC power panel to the installed enclosure.
 - b. A minimum of 2'-0" of wire shall be left available in the enclosure for field termination.
 - c. Installation of a service disconnect is NOT required. Disconnect device will be installed inside the enclosure by OSU Utilities Dept. technician.
 - 3. Installation of two (2) pipe penetrations to accept stainless steel thermo-wells sized to accept 1/4" x 6" Resistance Temperature Detectors (RTD's). RTD's will be supplied and installed by OSU Utilities Department.
 - a. Penetrations shall consist of one (1) each on the main chilled water supply and chilled water return lines and must penetrate the insulation to be usable.

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- b. Penetrations shall be located as close as practical to the main building isolation valves so that true supply and return temperatures can be monitored.
- c. The chilled water flow meter should also be located on the main chilled water supply line, as close as practical to the building isolation valve, so that building flow, and not bypass flow, is metered.
- 4. Installation of the following sensing/control wiring. All sensing/control wiring shall be 3 conductor, stranded, 18AWG shielded cable with ground wire.
 - a. One cable to each of the chilled water thermo-wells.
 - b. One cable to the chilled water flow meter.
 - c. One cable to the condensate return flow meter
 - d. All four (4) of the above cables shall be installed in metallic conduit from the meter enclosure to within twenty-four inches (24") or less of the thermo-well or flow meter.
 - e. The final distance to the thermo-well or flow meter shall be made up with liquid-tight flexible metal conduit.
 - f. A minimum of twenty-four inches (24") of wire shall be left exposed in the meter enclosure, and at the thermo-well or flow meter end to enable field termination.
- B. Installation of meter enclosure internals, and all field termination, will be performed by OSU Utilities Department technicians.

END OF SECTION 15975