

DIVISION 22 PLUMBING

Section 22 67 13.19 – De-Ionizing Water Piping for Laboratory Facilities

PART 1: GENERAL

1.01 Codes and Standards:

- A. Plumbing Code Compliance: Comply with applicable portions of Uniform Plumbing Code (UPC) 2003 Edition pertaining to selection and installation of Plumbing materials and products. Laboratory water is that which is downstream of a backflow preventer.
- B. The design guidelines contained herein include the requirements for systems, materials, fittings and valves utilized for piping systems at Texas State University. It is the intention of this document to provide a standard for piping systems at Texas State University in order to provide the highest level of quality and standardization possible; it is not intended to be a guide specification.
- C. For buildings that need De-Ionized Water (DIW), locate a non-pressurized DIW tank high in the building. There is a stainless-steel orifice in the line (1/4" for buildings with large DIW demand, 1/8" for buildings with small demand) to limit the amount of makeup to the tank. A stainless-steel solenoid valve maintains the level in the DIW tank. A larger Polypropylene Pipe Schedule 80 line (often 2 inch) lets DIW flow by gravity from the tank to the building uses.
 - 1. A pressurized DIW tank will be considered, submit for approval by Texas State University-San Marcos.
- D. Avoid 2-1/2, 3-1/2 and 5-inch pipe in deionized-water systems.
- E. An ultraviolet sterilizer shall be installed in the piping downstream of the DIW tank.
- F. DIW tank supply piping shall have a meter system. DIW tank shall be provided with tank level sight glass. Sight glass shall be piped external to tank and be provided with isolation service valves at top and bottom of glass. Sight glass shall be equipped with high and low level switches. Switches shall be located within the section of sightglass isolated by service valves. Switches shall provide dry contacts for reporting conditions to system.

PART 2: PRODUCTS

2.01 Materials and Products:

- A. General: The following are materials and product standards to be followed in the design of domestic water systems.

PART 3: EXECUTION

Refer to Section 22 11 19.

END OF SECTION 22 67 13.19