232216-H: SUPPLEMENTAL STEAM SPECIALTIES (15525-H)

Related Sections

Basis Guideline: 232216 - “Steam Specialties”
For an explanation of the use of these guidelines, see “Design Guidelines for UMHHC Facilities”

Steam Pressure

Low pressure steam (LPS) and medium pressure steam (MPS) is available from the UM Central Power Plant for facilities on the main hospital campus. LPS from the power plant shall be sized for 9 PSIG (Winter) to 13 PSIG (Summer) at the entrance to the building. 60 PSIG MPS from the power plant is limited and should be utilized only for medical equipment requiring 60 PSIG steam (i.e. sterilizers, etc) and as a back-up to the LPS heating system.

Lower steam pressures are to be anticipated at air handling units, humidifiers or absorption chillers. A/E shall base steam selections on actual steam pressure anticipated in the steam system.

Jet compressors are not to be used.

All condensate return shall be returned to the UM Central Power Plant.

Traps, Strainers

Inverted bucket traps shall be used on drips, on high-pressure condensate and where condensate must be lifted.

Float and thermostatic traps shall be used on equipment with varying condensate loads (heating coils, heat exchangers, absorption chillers, humidifiers, etc.).

Humidifiers

Primary humidification at the central AHU's will be limited to setback schedules which will assure that condensation on the perimeter glazing does not occur.

All steam connected to the building steam supply, whether primary or secondary, are to contain insulated dispersion tubes. Humidifiers shall be located downstream of supply fans in straight section of supply duct.

Electronic humidifiers shall be provided with a modulating control package, remote blower pack, factory supplied remote humidistat (with set point and readout) and adjustable discharge nozzle.

Duct mounted humidifiers shall be mounted in a section of stainless steel or aluminum sheet metal, of length twice the absorption distance of the humidifier, sloped back to the distribution tubes. Provide hinged access door in side of duct for access to clean distribution tubes. Access door shall match ductwork material.

Special consideration shall be given by the A/E to the location of the humidifier distribution panel as to ensure proper steam dispersion prior to any obstructions in the airstream (i.e. duct elbows, transitions, take-offs, etc). The hospital has experienced problems with false smoke alarms in installations where the duct smoke detector (including those associated with smoke dampers) is in too close of a proximity to the humidifier. The A/E shall be responsible for coordinating the location of these devices, including indicating the device locations on the construction documents, to prevent moisture accumulation and/or false smoke alarms. Specify high-performance dispersion panels (i.e. Dri-Steam “Ultrasorb”) where dispersion distances are limited.
**Installation**

Size traps for three times the condensate rating unless the coil or vessel manufacturer recommends otherwise. Install multiple traps where one trap will not handle the condensate load.

Traps shall have unions or flanges for removal of traps.

Provide strainers ahead of all controlled devices. Provide a valved blow-down line for each strainer, using a full-size ball valve.

Show traps on all steam equipment drains and all steam line condensate drains.