

REVISIONS		
Revision Date	Section	Summary of Change
1/5/11	University Contact	Changed University Contact information
1/5/11	Products/Traps	Changed Model #TD52*12L to UTD52 for TD Applications
1/5/11	Products/Traps	Deleted Armstrong and Hoffman from approved manufacturers for bucket and F/T applications
1/5/11	Products/Valves	Deleted Dezurick, Jamesbury for steam valves

BUILDING STEAM & CONDENSATE PIPING

UNIVERSITY CONTACT:

Steam Services Maintenance & Operations
(302)831-4878

GENERAL:

HIGH PRESSURE (125) PSIG STEAM
MEDIUM PRESSURE (45) PSIG STEAM
LOW PRESSURE (15) PSIG STEAM

1. Steam and condensate service shall be 150 lb class.
2. All condensate return piping shall be mild steel, schedule 160 for corrosion allowance.
3. Collection legs shall be size per ASHRAE "System and Equipment Handbook", for "automatic" warm-up.
4. Trapping shall be sized for "supervised" startup with the addition of a 2 in purge valve at bottom of drip leg.
5. Typical trap piping shall conform to ASHRAE "System and Equipment Handbook".
6. Pressure reduction stations shall include moisture separator, y-stainers with valved blowoff connection (capped), pressure gauging, upstream and downstream isolation valves test valve and a full sized manual by-pass.
7. Pipe unions shall be double seated, brass only
8. All steam service to auxiliary buildings such as Dining, Housing, or other non-academic functions shall be metered for energy captured by the energy management Scada database.

PRODUCTS:

Specialities

1. Pressure reducing valves shall be packless construction, stainless steel trim, externally air loaded for buildings that include ATC compressed air service;

Manufacturer: Leslie

2. Moisture Separators;

Manufacturer: Sarco, Mueller or Yarway

3. Traps;

Manufacturer: Sarco/Spirax UTD52 for TD applications;
Sarco/Spirax for bucket applications;
Sarco/Spirax for F/T applications.

4. Thermometers shall be liquid filled, 4 1/2 face minimum ranged such that operating condition includes: 0-15 psig for low pressure applications, 0-60;

Manufacturer: Ashcroft, March-Trelice

5. Grade 5 flange bolting;

6. Steel spiral wound gasket impregnated with PTFE;

Manufacturer: Flexitalic

7. All steam and condensate isolation valving for distribution shall be double block and bleed.

Valves

1. Steam valves 2 in and greater shall be BF, high performance, stainless trim, cast steel body, renewable PTFE seats, manual low reduction gear operator (with >20 turns open to close) packed with high temperature grease, lug design, RF;

Manufacturer: ABZ

2. Steam Valves <2 in shall be gate, NPT, 3000 #, OS&Y, cast steel trim and body;

Manufacturer: Hancock, Velan, Flowserve

3. Condensate valves shall be ball, floating type, 2 piece design, stainless steel or Telfon coated ball, renewable dual PTFE seats, stainless steel trim, RF;

Manufacturer: Apollo, American Series 4000

4. Valve handwheels shall be cast. Gear operators shall be packed with high temperature grease.

EXECUTION:

1. All branch connections shall be accomplished by reduction fitting or reinforced welded fitting. No stub in connections allowed.
2. Direct trap discharge to condensate return piping shall be introduced at the center or 45° of the flow area, not perpendicular fitted with an internal stainless steel sparger.
3. All valves in buildings shall be operated from floor level. Provided chain-wheel operators or platform as necessary.
4. All butterfly valves shall be positioned with stem in the horizontal.

DO'S AND DON'TS:

DO'S: N/A

DON'TS:

- DO NOT** Substitute alternate bolts and nuts.
- DO NOT** Use cast bronze or cast iron in steam services.

-- END OF SECTION --