PHYSICAL FACILITIES
2017 Consultant’s Handbook
Division 33 UTILITIES
6304 STEAM TRAPS

1 General
1.1 Materials and installations shall be in accordance with the following industry and association standards.
   - ASME B1.20.1 Pipe Threads, General Purpose (Inch)
   - ASME B16.5 Pipe Flanges and Flanged Fittings
   - ASME B16.11 Forged Fittings, Socket-Welding and Threaded
   - ASME B31.1 Power Piping Code
   - ASTM Materials
   - AWS Welding

2 Design Conditions:
2.1 Steam traps shall be sized for full operating flow.
2.2 Traps shall be selected based on manufacturer’s recommendations for the specific applications.
2.3 Thermodynamic disc steam traps shall be used to trap the high pressure steam mains. The high pressure trapped condensate line shall discharge to the low pressure main where available.
2.4 The design engineer shall consider functionality, efficiency of operation, initial cost, life span, location, size and maintainability of traps, and select the best option for the application.
2.5 The design engineer shall specify steam traps including all features and options necessary on the design specifications or drawings. Do not leave it up to the contractor to select steam traps.
2.6 Consult Utilities Engineering if an application is believed to be outside of these conditions.

3 Steam Traps
3.1 Steam trap bodies and trim shall be suitable for the pressure classification for which they are designed, but not less than 100 PSIG.
3.2 Steam traps shall be fabricated of materials of an ASTM Specification that complies with the requirements of ASME B31.1 Power Piping Code.
3.3 End Connections
   3.3.1 2” and under to be ASME B16.11 Class 2000 Threaded

3.3.2 2½” and over to be ASME B16.5 Class 300 Raised Face Flanged

3.4 Preferred Manufacturers
   • Spence
   • Spirax Sarco
   • Hoffman H-Series

4 Installation Guidelines
4.1 Steam traps shall be located 12” below the devices they serve.
4.2 Steam traps, strainers, and valves shall be piped such that they are accessible for maintenance.
4.3 Steam traps shall have an isolation valve on either side of the trap arrangement to allow isolation for maintenance and removal.
4.4 All steam traps shall have a strainer installed upstream.
4.5 All steam traps shall have a three-way test valve installed downstream. Test port shall be piped such that discharge does not blow directly toward personnel operating valve or onto insulation of adjacent piping.