DIVISION 15 - MECHANICAL

Section 15520 - Steam Piping and Specialties

Introduction

Piping and specialties associated with:

STEAM AND STEAM CONDENSATE SYSTEMS

Part 1 - General

• Comply with applicable codes
• Refer to section 15990 For testing requirements

Part 2 - Products

• Pipe Schedule -

<table>
<thead>
<tr>
<th>Service</th>
<th>Size</th>
<th>Pipe</th>
<th>Fittings</th>
<th>Joints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steam</td>
<td>Up to 2&quot;</td>
<td>Schedule 80</td>
<td>Forged carbon steel</td>
<td>Threaded, bevel weld or socket weld</td>
</tr>
<tr>
<td></td>
<td>2 ½ &quot; and larger</td>
<td>Schedule 40</td>
<td>Forged carbon steel</td>
<td>Bevel welded</td>
</tr>
<tr>
<td>Condensate</td>
<td>All</td>
<td>Copper type L</td>
<td>Wrought copper</td>
<td>15% silver brazing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>seamless hard-drawn</td>
<td></td>
<td></td>
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</tbody>
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• Pipe Gasketing - Steam services – Spiral wound – “Flexataulic” or UA approved equal.

• Valves
  • Condensate valves to be steam rated ball valves or high-performance steam rated lug type butterfly valves.
  • Steam valves to be steam rated globe valves or high-performance steam rated lug type butterfly valves.
  • Provide valves at all equipment and on all main branch take-offs.

• Pressure Gauges Shall Be:
  • Rated for steam service.
  • Cast aluminum with 4 ½” dial.
  • Selected with normal operating range at the midpoint of the scale.
  • Furnished with pressure snubber and shutoff valve.
  • Installed on both sides of all pressure regulators.
  • Installed at the inlet of at all steam using equipment.

• Strainers Shall Be:
  • Screwed 250# cast-iron, threaded through 2”.
  • Flanged (150 lb.) 2 ½” and larger cast iron.
  • Size 100 mesh.
  • Installed ahead of steam traps and control valves.

• Steam Traps: Preferred manufacturers are.
  • Armstrong bucket for end of line drip and main lines.
• TLV float & thermostatic for modulating service.

• Pressure Regulators Shall Be:
  • Fisher, Industrial Type 92B.
  • Globe valve in by-pass.
  • Vented to exterior of building through relief valve.

• Expansion Joints Shall Be:
  • Hyspan series 3501 – externally pressurized.
  • Stainless steel body and travel arm.

• Condensate Pumps shall be:
  • Duplex electric pump style.
  • Cast-iron housing.

Part 3 – Execution

• Workmanship
  • Avoid direct - buried steam and condensate systems.
  • Steam trap and strainer shall be piped as an assembly with isolation valve and union at each end of the assembly.
  • Terminate relief valve vent lines outdoors in safe location - verify with U of A.
  • Use eccentric reducers in steam piping to assure level bottom.
  • Pitch steam and condensate piping downward in direction of flow at 1/2" per 10 ft.
NOTES:

1. STEAM RATED ISOLATION BALL VALVE
2. CHECK VALVE
3. STRAINER
4. STEAM TRAP
5. BRASS FITTING MALE IRON PIPE TO COPPER