

**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 -

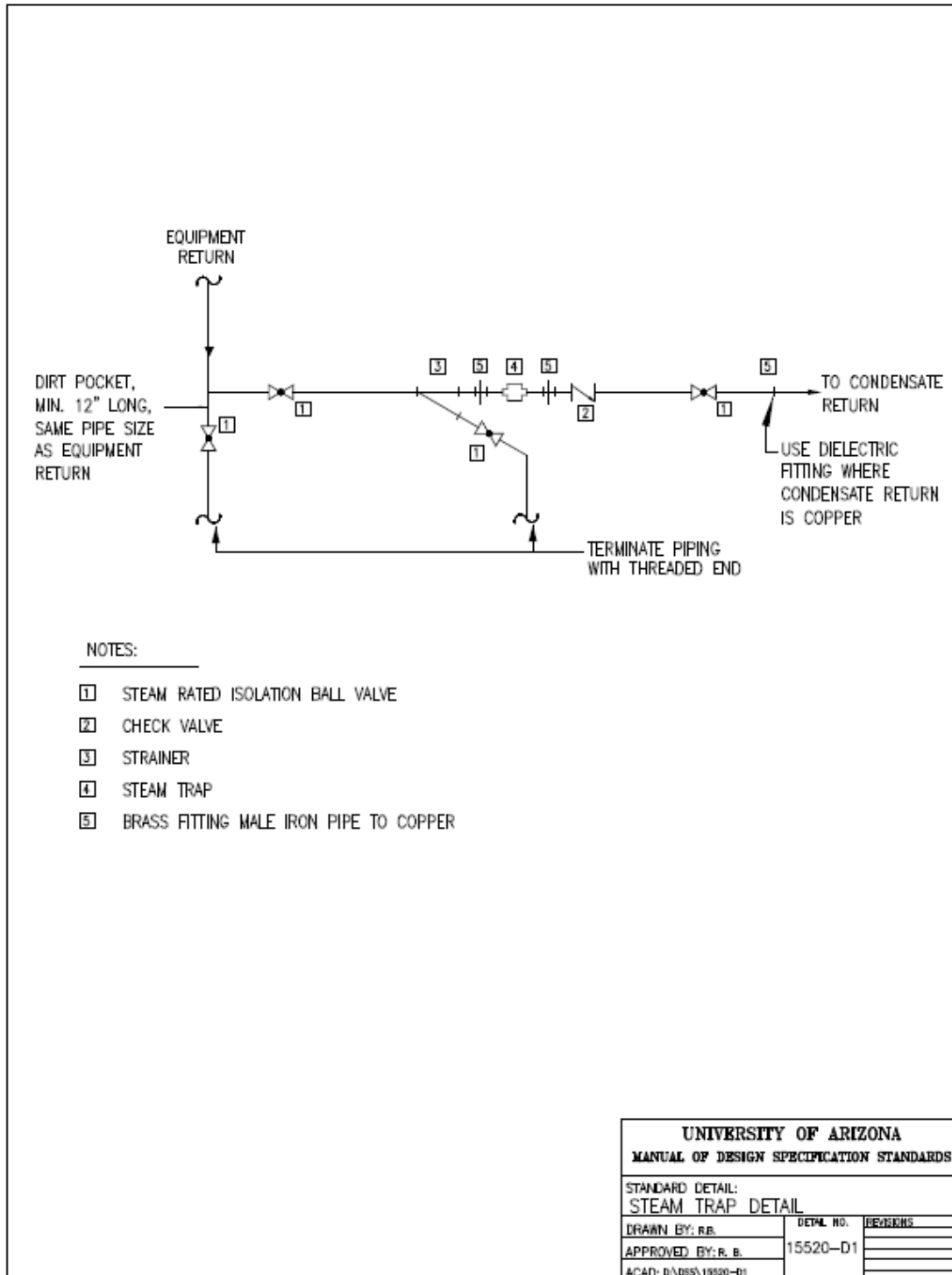
<u>Service</u>	<u>Size</u>	<u>Pipe</u>	<u>Fittings</u>	<u>Joints</u>
Steam	Up to 2"	Schedule 80 seamless black steel	Forged carbon steel	Threaded, bevel weld or socket weld
	2 ½" and larger	Schedule 40 seamless black steel	Forged carbon steel	Bevel welded
Condensate	All	Copper type L seamless hard- drawn	Wrought copper	15% silver brazing

- 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 ½" per 10 ft.



End of Section 15520