

Steam and Condensate Piping Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. **___ List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date		
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13p – Steam and Condensate Piping Construction Checklist

Pressure Reducing Valve Information										
PRV	Specified				Submitted				Installed	
Manufacturer										
Model										
Stage	1	2	1	2	1	2	1	2		
Size										
Capacity, lbs/hr										
Entering/Leaving Steam Pressure, psig										
Safety Relief Valve Pressure Setting, psig										
Safety Relief Valve Capacity, lbs/hr										
Sound level, dBA at 3 feet AFF and 3 feet in any direction										

Associated Checklists					
Steam Condensate Pump(s)	<input type="checkbox"/>	Heat Exchanger	<input type="checkbox"/>	DDC	<input type="checkbox"/>
Others	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Flushing and cleaning plan	<input type="checkbox"/>	
Leak test reports	<input type="checkbox"/>	
Welder Certification	<input type="checkbox"/>	
Comments:		

Installation Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Piping		
Piping installed per the drawings and details	<input type="checkbox"/>	<input type="checkbox"/>
Piping, fittings, valves, traps and equipment properly supported and seismically anchored per the details	<input type="checkbox"/>	<input type="checkbox"/>

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Installation Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Piping, fittings, traps and valves insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>
In-line equipment insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>
Piping labeled per specification with flows indicated in the correct direction	<input type="checkbox"/>	<input type="checkbox"/>
Strainers and low-point drains opened and verified to be clean	<input type="checkbox"/>	<input type="checkbox"/>
Construction strainers removed	<input type="checkbox"/>	<input type="checkbox"/>
Test plugs (P/T) installed near all control sensors and as per spec	<input type="checkbox"/>	<input type="checkbox"/>
Flushing and cleaning plan submitted and approved	<input type="checkbox"/>	<input type="checkbox"/>
Piping system properly flushed and cleaned and temporary piping removed	<input type="checkbox"/>	<input type="checkbox"/>
Piping pressure tested according to contract documents	<input type="checkbox"/>	<input type="checkbox"/>
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>
Provisions in place for expansion compensation	<input type="checkbox"/>	<input type="checkbox"/>
Record drawings updated to reflect the actual installation	<input type="checkbox"/>	<input type="checkbox"/>
Valves		
Isolation valves provided at all branches and main takeoffs to facilitate isolation (as required by contract)	<input type="checkbox"/>	<input type="checkbox"/>
Valve installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>
Valve manufacturer labels permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>
Manual isolation valves checked for proper seal and found to travel freely	<input type="checkbox"/>	<input type="checkbox"/>
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>
Valves stroke fully and easily and spanning is calibrated (see calibration section below)	<input type="checkbox"/>	<input type="checkbox"/>
Valves that require a positive shut-off are verified to not be leaking when closed at normal operating pressure	<input type="checkbox"/>	<input type="checkbox"/>
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>
Valves tagged and valve schedule submitted and displayed as required	<input type="checkbox"/>	<input type="checkbox"/>
Adequate maintenance clearance in provided and valve is accessible	<input type="checkbox"/>	<input type="checkbox"/>
Unions installed to allow for easy removal of control valves	<input type="checkbox"/>	<input type="checkbox"/>
PRV Station		
Manufacturer's installation and pre-start-up checklists complete and attached	<input type="checkbox"/>	<input type="checkbox"/>
PRV installation matches contract documents and manufacturer's recommendations	<input type="checkbox"/>	<input type="checkbox"/>
Tags affixed with proper information	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturer's straight run pipe diameters verified and correct	<input type="checkbox"/>	<input type="checkbox"/>
Sensing line installation correct distance from PRV, pitch of line, pressure gauge, single or common for PRVs	<input type="checkbox"/>	<input type="checkbox"/>
Safety relief valve installation complete	<input type="checkbox"/>	<input type="checkbox"/>
Drip pan elbow installed	<input type="checkbox"/>	<input type="checkbox"/>

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Installation Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Valve body and drip pan drains piped to floor drain	<input type="checkbox"/>	<input type="checkbox"/>
Sensors and Gages		
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>
Piping gages, BAS and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>
TAB		
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>

Operational Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comments
PRV Station		
Safeties installed and safe operating ranges for this equipment provided	<input type="checkbox"/>	<input type="checkbox"/>
Bypass valves verified closed	<input type="checkbox"/>	<input type="checkbox"/>
Manual and automatic steam and condensate valves positioned for start-up	<input type="checkbox"/>	<input type="checkbox"/>
Steam introduced to system slowly, gradually to warm up system	<input type="checkbox"/>	<input type="checkbox"/>
Steam pressure carefully raised just until safety relief valve lifted through use of bypass line; lift pressure recorded to confirm relief valve setting	<input type="checkbox"/>	<input type="checkbox"/>
Final PRV pressure setting set for full steam mode or partial steam mode (indicate which one)	<input type="checkbox"/>	<input type="checkbox"/>
PRV pressures set (one at a time) for 1/3 and 2/3 valves with other valve isolated and proper load based on set mode (full or partial)	<input type="checkbox"/>	<input type="checkbox"/>
Permanent mark made on pressure adjustment spring to indicate where set; locking ring installed	<input type="checkbox"/>	<input type="checkbox"/>
All trap assemblies verified for proper operation	<input type="checkbox"/>	<input type="checkbox"/>
Safeties installed and safe operating ranges for this equipment provided	<input type="checkbox"/>	<input type="checkbox"/>

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be. All test instruments shall have had a certified calibration within the last 12 months: **Y/N**_____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1 st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

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Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments: