Steam Engineering

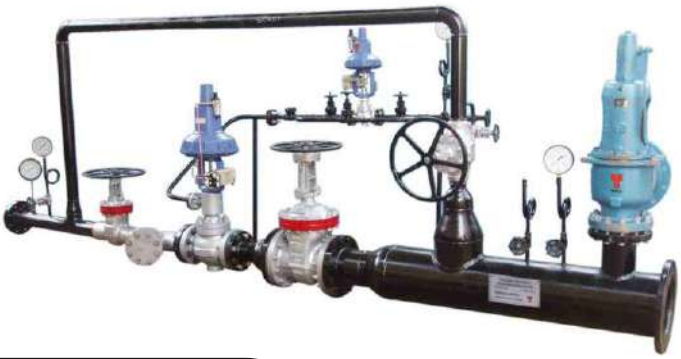
Service One Pager

PRODUCT : PRDSH - Pressure Reducing and DeSuper Heating System

Document No : SE/SOP/PRDSH Rev: 00

Product

A Pressure Reducing and Desuper Heating System (PRDSH) is prefabricated module used to desuperheat high pressure superheated steam to desired process pressure and temperature.



System Requirement

1. Necessary IBR approvals should be obtained from local authorities.
2. Parts should be clean and flushed out with compressed air before installation.
3. Safety valve exhaust should be routed to safe location.
4. Provide instrument air pressure as specified on actuator.
5. Spray water quality should be of DM/RO equivalent.
6. Use pair cable for instruments.
7. Provide instrument air as per "ISO 8573-1:2001" norms.

Critical Components

PRDSH

- Pressure control valve
- De-Super heater
- Control panel

Installation

1. The inlet and outlet lines must be properly supported so that the valve is not subjected to undue stress and vibrations.
2. Temperature sensor must be installed at a distance of minimum 12 meter from the water injection point.
3. Minimum 5 meter straight length is must at downstream of DSH spray nozzle.
4. Safety valve vent should be routed to safe location.
5. Spray nozzle direction should be same as steam flow.
6. TD trap module should be installed at immediate first bend from spray nozzle.

System Sequence

Open steam isolation valves

↓

Open water isolation valves

↓

Slowly increase the set value of steam pressure

↓

Set temperature in controller

↓

Start water pump

↓

PRDSH is operational

Please contact us on 1800 209 0115 or
write at SteamEngineering@Thermaxglobal.com

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Troubleshooting

SYMPTOMS	PROBABLE CAUSE
Control valve not operating	No/low air pressure
	No 4 -20mA output from PID controller
	Calibration disturbed
Outlet temperature high	Inlet pressure not as per design
	High spray water temperature
	DSH nozzle choke
	Insufficient water quantity
Pump outlet pressure not sufficient	NPSH not sufficeint
	Pump strainer choke
Control valve passing in close position	Calibration disturbed
	Seat & plug worn out
	Foreign partical accumulated

Controller Setting (PXF4)

TIC	PIC
IN 4-20 mA	IN 4-20 mA
SVH - 400*	SVH - 16*
SVL - 0*	SVL - 0*
Pvb - 400*	Pvb - 16*
Svf - 0*	Pvf - 0*
P - 10*	P - 10*
I - 60*	I - 60*
D - 0*	D - 0*
REV - rv--	REV - rv--

Put AT ON incase of fluctuations in outlet pressure

* marked parameters to be changed at site as per requirement.

Periodic Maintenance as per O&M Manual

Cleaning
- Strainers
- NRV's
- DSH nozzles

Lubrication
- Greasing of isolation valves

Checking
- PT & TT calibration
- Control valve calibration
- Condensate pot

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