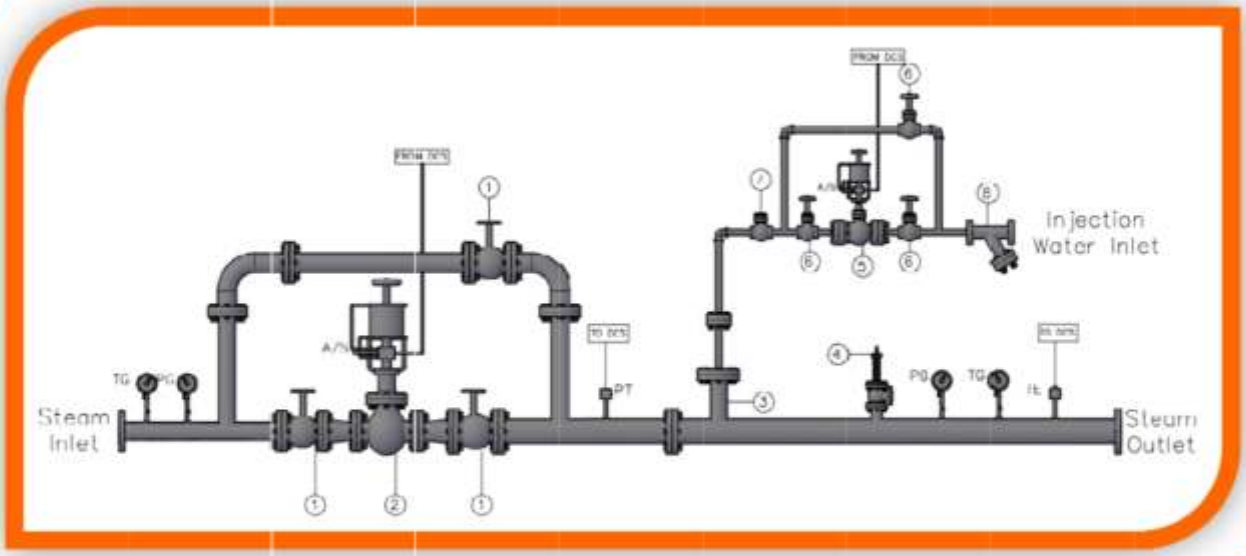
BOMAFA
Special Valve Solutions

Pressure Reducing Cum Desuperheating Station



Sr. No.	Part Name
1.	Isolation Valve
2.	Steam Control Valve
3.	Desuperheater
4.	Safety Valve
5.	Water Control Valve
6.	Isolation Valve
7.	Non Return Valve
8.	Strainer

Pressure Reducing Cum Desuperheating Station: MODEL NO: PRDS

Applications

To ensure the process is met with right pressure and temperature, Pressure Reducing Cum Desuperheating System is installed when the steam is superheated. BOMAFA PRDS systems are designed, manufactured and built to ensure accuracy, consistency and reliability.

Benefits

- *Detailed steam system knowledge is applied for design and sizing.*
- *Accurate pressure and temperatures are maintained.*
- *Continuous process performance.*

Key highlights

- A variety of models for desuperheater can effectively cater to very high turndown requirements.
- Bypass line with an isolation valve is installed so as to ensure continuous supply of steam during overhauling/ maintenance of the main pressure control valve and spray water control valve.
- A safety valve is installed downstream of the PRDS system so as to ensure that the downstream components are protected from the high pressure.
- Rangeability 1:10 as a standard, however depending upon the model of desuperheater rangeability can be increased five-fold.
- Relative components/ fittings are equally important. BOMAFA designs, manufactures and tests all the components in-house in its own facilities thereby ensuring "Single point responsibility".
- Our hole-bush designs as well as labyrinth disc designs can be incorporated successfully in steam control valve as well as spray water control valve for massive pressure drop reductions.

BOMAFA INDIA

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Description

- PRDS system is able to provide the best possible pressure reduction and atomisation requirement to bring down the pressure and temperature of the superheated steam.
- Depending upon the model selected for desuperheater, we are ab le to provide the shortest possible straight length distance after the PRDS system.
- Variety of models available to take care of high turndown requirements.
- The steam entering the inlet section of the PRDS pipeline is passed through the inlet isolation valve and enters the steam pressure control valve. The steam also enters the bypass line and the by pass isolation valve is kept closed under normal operation but will be used for throttling purpose when main pressure control valve is closed due to overhauling/ repairs.
- Steam exits from the steam pressure control valve and comes out from the outlet isolation valve into the outlet piping.
- A pressure sensor/ transmitter is installed in the outlet st eam pipeline which senses the pressure and depending on its set point gives signal to the DCS or field mounted cont roller. This DCS or field mounted controller in turn gives signal to the E/P positioner installed on the valve or I/P convertor installed in the field. E/P positioner would give signal on the actuator of the valve t hus opening or closing the steam control valve depending on the load variations. I/P convertor will give signal to the valve positioner which in turn will give signal to the actuator of the valve thus opening or closing it depending on the load variations.
- As the reduced steam pressure further passes down the outlet steam pipeline there will be a temperature sensor installed as shown in the sketch after the desuperheater.
- This temperature sensor senses the temperature of the steam and depending on its set point gives signal to the DCS or field mounted controller. This DCS or field mount ed controller in turn gives signal to the E/P positioner installed on the valve or I/P convertor installed in the fiel d. E/P positioner would give si gnal on the actuator of the valve thus opening or closing the spray water valve depending on the load variations. I/P convertor will give signal to the valve positioner, which in turn will give signal to the ac tuator of the valve thus openi ng or closing it depending on the load variations.
- The spray water will thus be sprayed through the desuperheater to bring down the temperature of the steam and the amount of spray water quantity will be regulated by this spray water control valve.

Particulars	Inlet	Outlet
Line Size	DN 25 to 300/ 1” to 12”	DN 25 to 1000/ 1” to 40”
Pressure Rating	ASME 150# to 2500#	ASME 150# to 2500#
Material	SA 106 Gr. B/ SA 516 Gr. 70/ SA 335 Gr. P11/ SA 387 Gr. P11/ SA 335 Gr. P22/ SA 387 Gr. P22/ SA 335 Gr. P91	
End Connection	Butt-welded and Flanged	
Leakage Class	As per FCI 70-2, Class-IV & V	
Inspection	IBR/ Any third party inspection agency	

** For higher size consult factory*

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