



For *Severe Service* Control Solutions, Turn to Fisher Technology & Innovation

Control Valve Case History

Industry: Commercial
Application: LP Steam Letdown

Overview:

The customer uses superheated steam for heating buildings and provides heat and steam for scientific research and student labs. The customer approached Spartan to supply a high turndown pressure control valve station with 100% back up that would meet their noise level requirement of 85 dBA maximum. They also required pressure transmitters and local electronic controllers.

Process Conditions:

Process Fluid	Superheated Steam
P1	1035 kPag
P2	103 kPag
Inlet Temp	210°C
Total Maximum Load	51,000 kg/hr

Solution:

The high turndown requirement plus valve noise and vibration were primary concerns. The solution involved a number of valves to meet the customer's high turndown needs. Control is provided by split ranging the (3) configurable outputs of the DPR960 controller. All valves included DVC6010 digital positioners.

To solve the noise and vibration challenge Fisher's patented WhisperFlo trim was used where appropriate to meet the customer's noise requirement. The multipath and multistage design of WhisperFlo trim utilizes six key noise-reducing techniques to reduce noise far below that achieved using conventional valve trim.

Customer Benefits:

The problems of noise and vibration were eliminated with the use of Fisher's WhisperFlo trim and the high turndown requirement was met by using a small 2" control valve in parallel with a 6" and 10" control valve. The control strategy can be easily and quickly adjusted or modified using the configurable self-tuning DPR950 and DPR960 electronic controllers. With this control station, the customer could rely on smooth and steady steam pressure control to meet its needs through all seasons of the year.



SPARTAN CONTROLS

CH1 LP Steam Letdown WhisperFlo.doc

