

Fisher® EWD-TBX Valves with WhisperFlo® Trim Reduce Noise and Vibration at a Steam-Pressure-Reducing Station



RESULTS

- Steam conditioning system operating troublefree since installation of Fisher® steam conditioning valves
- WhisperFlo® trim reduces operating noise by up to 40 decibels
- Reducing velocity at the valve outlet (below 0.7 mach) eliminates vibration.



APPLICATION

Steam let-down service

CUSTOMER

The utilities area of a chemical plant in Texas.

CHALLENGE

An existing, non-Fisher® steam let-down valve was noisy and failing to meet shut-off requirements. Site managers were updating the utilities' area and wanted to improve control, capacity, and heat-transfer efficiencies throughout the chemical complex. Engineers from Emerson Process Management and its Fisher® valve division worked with the local business partner, Puffer-Sweiven, to design a valve that would meet the customer's requirements. Those requirements included low-noise trim, straight-through design, and improved steam-temperature control.

Personnel at this chemical plant were tearing down an old boilerhouse, updating and relocating equipment. The Fisher valve division supplied customized, steam-conditioning valves to improve control, reduce noise, and increase operating stability.



For more information: www.fisher.com



SOLUTION

Because installation restrictions ruled out an angle valve, the Engineered Products' group customized a Fisher® globe-style design called an EWD-TBX steam-conditioning valve. The design accommodated the expansion of steam due to pressure drop while enabling the proper mix of steam and injected water. The valve was designed to improve heat-transfer efficiencies by maintaining control of steam temperature close to its saturation temperature.

Three of these EWD-TBX valves were installed in horizontal lines. The largest of the trio was a 20-inch globe valve with a 30-inch cooler section welded to its body. Fully assembled, the valve met ANSI Class V shut-off standards, measured 10x9 feet, and weighed several tons.

WhisperFlo®-Level Z trim helped reduce valve noise and increase operating stability. Multi-path, multi-stage noise abatement technology reduces noise by up to 40 decibels (dBA), surpassing conventional trims by five to ten dBA.

The three EWD-TBX steam-conditioning valves have been operating for over half a year without any maintenance issues. They lower steam temperature close to saturation, improving heat-transfer efficiencies.

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