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## EWD-TBX VALVE WITH WhisperFlo® TRIM REDUCES NOISE AT A NEW STEAM-PRESSURE-REDUCING STATION

Managers of a chemical plant in Texas were updating their utilities to improve control and increase capacity. The existing steam let-down valve, installed in a horizontal position, was noisy and failed to meet shut-off requirements. Site managers wanted a valve that would correct these issues as well as lower the steam temperature closer to saturation temperature, which will improve heat transfer efficiencies throughout the chemical complex.

The Local Business Partner, Puffer-Sweiven, and the Fisher® Severe Service team studied the application and developed a customized valve to meet the customer's requirements. Those requirements included low-noise,

straight-through design, and improved steam temperature control. Because installation restrictions ruled out an angle valve, a custom globe style valve was developed and called a Type EWD-TBX steam conditioning valve.

The customer ordered three new EWD-TBX valves, as well as pressure-control and waterinjection valves for the new steam pressure reducing station. The largest of the EWD-TBX valves was a 20-inch globe valve with a 30-inch cooler section welded to the valve body. The design accommodates the expansion of steam due to pressure drop while enabling the proper mix of steam and injected water. This design is key to maintaining control of steam temperature close to its saturation temperature. Fully assembled, the valve met ANSI Class V shut-off standards, measured 10X9 feet, and weighed several tons.



The valve included WhisperFlo®-Level Z trim

to reduce noise and increase operating stability. WhisperFlo is a multi-path, multi-stage noise abatement technology that reduces noise by up to 40 decibels (dBA), surpassing conventional noise trims by five to ten dBA. WhisperFlo along with an appropriate body size reduces velocity at the valve outlet between 0 and 0.7 Mach, which not only reduces noise but also eliminates vibration affecting downstream piping.

The Fisher team made the adjustments necessary to meet an expedited delivery and construction schedule. The "big" valve pictured was installed in March 2005 in a vertical (rather than horizontal) position.

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