



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

EWT VALVES WITH WhisperFlo® TRIM REPLACE NOISY FLARE VALVES

Four years ago, a Middle Eastern refinery conducted a plantwide noise survey and found more than 50 valves operating beyond acceptable noise limits. Since then, with help from the Fisher Severe Service group, the plant has been slowly replacing these valves. Two ten-inch flare valves now incorporate state-of-the-art, noise-abatement technology.

The original flare valves possessed little in the way of noise attenuating trim and were undersized with relation to flow stream velocity at their outlet. A high valve-outlet velocity led to excessive vibration of the downstream piping system – a phenomenon often overlooked with compressible flows.

As in many valve installations, the flare valves were smaller size than the immediate downstream piping. Pipe size is subject to a selection process involving gas density and mass flow rate. Control valve sizing, however, is typically based on price and therefore, the valves are often smaller than the adjacent piping.



A smaller control valve means that a reducer or expander is required at the valve outlet to mate the valve with the piping. Problems occur when the velocity-related turbulence generated by the expander creates its own noise, and the noise often exceeds that of the noise-abatement trim.

To address the noisy flare valves' problems, refinery personnel installed one 20X16 inch Type EWT valve and one 16X12 inch Type EWT valve from Fisher. Both units included field-proven WhisperFlo® noise reduction trim. WhisperFlo trim employs multi-path, multi-stage noise-abatement technology that can reduce noise levels by up to 40 dBA.

The combination of WhisperFlo and the correct valve-outlet size helped reduce the plant's noise problems and the vibration generated in the downstream piping. As a result of this successful project and other subsequent valve replacements, the refinery continues to rely on Fisher's Severe Service group for help with difficult control-valve applications.

For more severe service solutions, see us at www.fishersevereservice.com.

