

SEVERE SERVICE JOURNAL

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A Newsletter from Emerson's Severe Service Team

Research Products News Technology

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The Severe Service Journal is published quarterly by the Emerson severe service team and is distributed by email. To subscribe, go to www.FisherSevereService.com. The Emerson severe service team provides global customers with Fisher® severe service control valve solutions. Whether it is severe service applications for the power, hydrocarbon, chemical or pulp and paper industry, these technical experts deliver sound solutions to address critical applications for aerodynamic noise, cavitation and out-gassing issues, as well as particulate erosion. Please visit our website or contact your local Emerson sales office for more information.

New Severe Service Brochures

Emerson is in a continual process of developing brochures for customers interested in Fisher severe service control valve solutions. A list of our most recent brochures is shown below. You can view them by clicking on the image. For a hard copy of any of these brochures, call your Emerson local business partner or sales office.

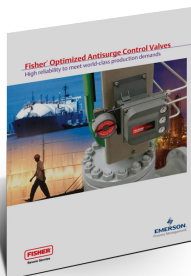
The Silent Treatment



Describes control valve noise from the science of noise to solutions that control noise. Topics covered include an in-depth look into how control valve noise is produced and propagates, the factors that contribute to noise generation, the effects of noise, noise prediction methods, and solutions and technologies that combat control valve noise. Cutaway images of Fisher noise-attenuation solutions are shown on pages 9–15.

Document #D351989

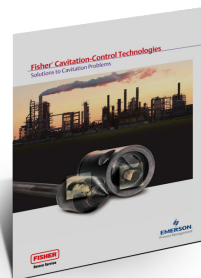
Optimized Antisurge Control Valves



Illustrates how Fisher optimized antisurge control valves enable high reliability and peak performance for lower operating costs and reduced commissioning time. Topics covered include a detailed look into the components that make up a typical Fisher optimized antisurge control valve and the level of performance the solution provides. The newly developed Fisher SS-263 volume booster and its role in this solution is also discussed.

Document #D351146

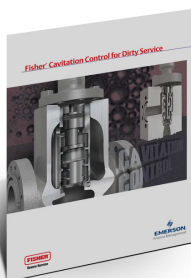
Cavitation-Control Technologies



Describes control valve cavitation from the science of cavitation to cavitation-control technologies. Topics covered include an in-depth look into how control valve cavitation is produced, the factors that influence cavitation, the effects of cavitation on equipment, prediction methods, and solutions and technologies that control cavitation. Cutaway images of Fisher cavitation-control solutions are shown on pages 9–19.

Document #D351912

Cavitation Control for Dirty Service



Cavitation with entrained particulate creates a challenging, severe condition for a control valve, however Emerson provides engineered solutions for such applications as detailed in the Cavitation Control for Dirty Service brochure. This brochure includes cutaway images of the Fisher NotchFlo™ DST control valve, Dirty Service Trim (DST), DST-G control valve, and 461 angle valve.

Document #D351830

Steam Conditioning Technologies

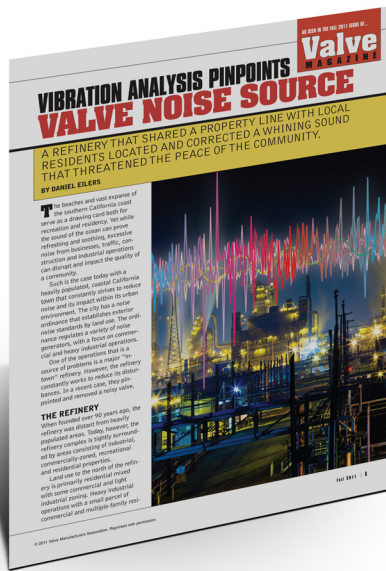


Includes topics of interest such as process and power trends, the science of steam conditioning, critical application and installation parameters, and correct steam conditioning equipment selection.

Document #D352003



Vibration Analysis Pinpointed Valve Noise Source



A refinery located in a southern California, United States, town experienced a noise problem at the southern end of its facility, which borders single-family homes. Loud harmonic noises over 113 dBA were generated near the ISOMAX process unit. The refinery hired a consulting firm to determine the exact source of the noise but tests were inconclusive. Refinery engineers suspected that control valves may be the source, so they contacted the local business partner of their major valve supplier. The supplier's severe service group recommended using vibration-analysis-based noise measurement equipment and processes.

High vibration levels were found next to 25-year-old quench valves with the highest readings near the valve stems. Refinery engineers and the local business partner of the supplier worked together to identify a valve configuration that could meet the performance levels and help eliminate noise concerns. In total, eight quench valves were replaced and noise no longer troubles the residents that live near the southern end of the refinery.

Read the entire article by Emerson noise expert Daniel Eilers, which appeared in the Fall 2011 issue of *Valve* magazine.

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