

# Frequent Repairs and Costly Plant Shutdowns Avoided with Fisher® Control Valve

## RESULTS

- The Fisher valve eliminated the plug binding, frequent repairs, and costly plant shutdowns that were being experienced with a non-Fisher valve.
- The Fisher valve was delivered ahead of quoted lead time in order to meet a previously scheduled plant shutdown as requested by plant personnel.



*The Fisher® EHD valve with Cavitrol® III trim is ideal for high pressure applications like drum level control.*

## APPLICATION

High pressure drum level control

## CUSTOMER

Power plant with natural gas fired combined-cycle combustion turbine

## CHALLENGE

The power plant was experiencing valve plug binding in the cage of their existing main non-Fisher high pressure drum level control valve. The problem developed initially during plant startup and was assumed to be the result of debris in the feedwater. Even after cleanliness issues with the feedwater were addressed, the valve continued to bind.

During the first 12 months of operation, the valve was disassembled and parts replaced several times. However, the exact cause of the binding could not be determined despite the best efforts of the manufacturer and their field engineering personnel.

The continued binding and the critical nature of the drum level control application raised concern about plant availability, and a decision was made to replace the valve. An engineering contractor employed by the power plant contacted the local Emerson sales office to inquire about engineering a Fisher control valve as a replacement.

High pressure drum level control presents a number of challenges for a control valve. The need for fairly high flow rangeability requires a characterized cage to ensure elimination of damaging cavitation formation at low flow and high pressure drops. In this installation, the cage required special characterization in order to achieve protection against cavitation and meet the high-end flow requirements, while fitting into the existing piping size and configuration.



Severe Service

## SOLUTION

The local Emerson sales office coordinated with factory personnel to design and develop the proper characterized cage to address the operating conditions. A Fisher 8- by 6-inch EHD valve assembly was specified to match the existing control valve installation. A Cavitrol® III three-stage, modified, equal-percentage cage was designed to meet the flow requirements.

Plant personnel requested a 19-week lead-time to support a scheduled plant shutdown in which the valve replacement would take place. Emerson personnel led the effort to target a 19-week expedited lead-time versus the typical 32-week lead-time needed for manufacturing.

## RESULT

The Fisher valve eliminated the plug-binding, frequent repair, and costly plant shutdowns that were occurring with the non-Fisher valve. Since its installation, the valve has performed successfully and required no repairs. Plant personnel were also pleased that the valve was delivered in advance of their scheduled plant shutdown.

For more information on severe service solutions, visit [www.fishersevereservice.com](http://www.fishersevereservice.com).

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