



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

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## **TURBINE OEM REPLACES FAILED FEEDWATER VALVES WITH A FISHER-ENGINEERED SOLUTION AND AVOIDS PENALTIES**

A large, turbine manufacturer had purchased two feedwater control valves to be used in parallel to control drum level in a combined-cycle power plant. One valve was (designated) to operate during startup and then transition to a main operating valve. The startup valve utilized anti-cavitation trim while the main operating valve had standard trim installed.

Early in the operation cycle, the valves consistently had issues controlling level in the high-pressure steam drum. Not only was control an issue, there were also problems with trim damage, stem rotation, and severe vibration to the piping system. The operational issues with this valve caused the end user to lose four days of operation on their 260MW steam turbine, leading to an estimated \$390,000 in lost revenue.

For two years, the original valve supplier attempted to solve the problem. After changing the internal components three times at a cost of approximately \$60,000 for parts and labor, with no improvement in performance, the turbine OEM approached the Fisher Severe Service group for a solution.

After reviewing the application, Fisher engineers determined that one 4-inch valve utilizing a characterized Cavitrol® III type trim could perform the duties of both the startup and main valves. This solution also minimized the possibility of operating the wrong valve during unit startup.

Since the Fisher valve installation, the plant has experienced no issues relating to trim damage, shutoff or piping vibration. Most importantly, the installation of this valve eliminated the possibility that the turbine OEM could face availability penalties.

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