



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

SUPERHEAT SPRAY VALVES REPLACE Z-PATTERN VALVES— ELIMINATING LEAKS AND TRIM EROSION

A 900 megawatt, supercritical, coal-fired power plant in Western Pennsylvania experienced problems with Z-Pattern valves. The superheat spray valves, installed upside down, experienced reoccurring packing leaks and trim erosion while operating at 5- to 25% open. The bottom-entry and the long lead time for spare parts complicated repairs. The plant's maintenance team had been pushed into three-year outage cycles and considered these valves one of the "weak links" that would disrupt that schedule. To make matters worse, the spray valves were critical to the overall process and needed to be 100% available for efficient plant operation.

The customer turned to the Fisher Valve Division for help with these maintenance problems. The local Fisher sales office (Equipment & Controls) worked with the Severe Service and Power Industry groups in Marshalltown, specifying valves that would pass 1/4-inch particulate and meet large turn-down-range requirements. After reviewing the application, the Fisher team recommended ANSI #2500 class, WC9 body, Design EH Globe valves. These custom-engineered superheat spray valves replaced four of the problematic Z-pattern valves.

All four Fisher valves included custom-designed, drilled-hole cages and plugs utilizing lower metal piston rings to handle the low flow conditions. The new valves also included tight shutoff and seals utilizing anti-extrusion rings, which help to prolong seal life in feedwater applications where particulate could be present.

Meanwhile, back at the plant, technicians re-designed their piping in order to install the valves in an upright position. This configuration provided added protection against packing degradation and trim wear.



Made at the Fisher service center in Burlington, New Jersey, the valves were installed during an outage in April 2004. They are still working well, without any maintenance problems. The Fisher® EH superheat spray valves provide control within 10 degrees of set point and operate around 60-65% open.

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



Severe Service