

# Control Valve Solution Replaces Existing Regulator for Improved River Water Application Service

POWER

## Challenge

A combined cycle power plant in Decatur, Alabama, had a large 8 x 6" regulator with custom trim installed on its river water application to keep certain pumps from deadheading. When the plant's demand for water was throttled back, this regulator would begin to open to provide a recirculation path for the constant pump pressure and flow. Even though there was some filtering, particulate still caused plugging in the pilot regulator and seating problems in the main regulator as well. The regulator had been in service for quite some time and finally needed to be repaired, replaced or reengineered since it continually required maintenance.

## Solution

The cost to replace the regulator was \$32,602, and due to the labor involved, the repair was even more costly. After working with the plant engineer, the decision was made to consider a control valve as a suitable replacement. The river water application was located far from the plant and did not have an air source, so a traditional air operated valve was out of the question. Control Southern later discovered that 480V 3-phase power was available, which led to the selection of a 6" Fisher® V150 control valve with an EIM M2CP electric actuator. This assembly was more cost-efficient, could handle the river water particulate with the shearing action of the v-notched ball, and could be controlled without a traditional air source.

## Results

The plant has been able to withstand pressure changes very well with the new control valve since it has provided good control and shutoff with maintenance-free operation. This allows maintenance personnel to focus on addressing other challenges, and also provides greater confidence in protecting valuable pumps. The cost savings can be derived from the price difference between the two assemblies.



(SIDE VIEW) Fisher V150 control valve with EIM M2CP electric actuator



(TOP VIEW) Fisher V150 control valve with EIM M2CP electric actuator

**\$32,602** (cost of replacement regulator) - **\$10,369** (cost of new control valve) = **\$22,233**