



Channel Partner Feature

Eastern Controls Inc.

Critical Service Valve Life for NY Power Plant Extended with LincolnLog™

Extreme temperatures, erosion, and cavitation found in boiler feedwater applications create demanding process conditions for control valves. In 2017, a power plant in Queens, New York had critical service valves that were failing in as little as one year. This caused numerous operational challenges, including unplanned outages and unnecessary costs associated with repairing or replacing these valves.

Seeking a more reliable solution, the customer turned to Eastern Controls Inc., a Masoneilan™ channel partner and Masoneilan Authorized Repair Center (MARC™).

Customer Challenge

The customer was experiencing frequent failures with the two-way valve solution it was using for boiler feedwater level control, as well as with other critical service valves deployed throughout the power plant. High pressure drops associated with the plant cycling process caused damaging cavitation within the valves, requiring repeated costly repair work.

“Control level is critical. When you start up, there’s a huge pressure drop which causes cavitation in most valves. If the plant is cycling a lot, these valves get beat up from cavitation,” said Randy Ruth, EVP of Engineered Solution Sales for Eastern Controls Inc. Valves not designed to eliminate cavitation “may last a year, depending on how much you’re cycling.”

Fed up with the costly cycle of valve repairs and replacements, plant management wanted to take a different approach.

Solution

The previous configuration was designed to accommodate the high pressure and low flow rate of the startup process as well as the lower pressure drop, higher flow of main feedwater regulation. Yet erosion and cross-over cavitation were damaging both valves, disrupting a critical process within the combined cycle plant and undermining plant efficiency.

Applying its considerable application knowledge, the team at Eastern Controls Inc. proposed replacing the two-way valve solution with a single Masoneilan LincolnLog in 2018. Engineered to eliminate cavitation and control velocity and pressure drop, LincolnLog valves are highly effective in pump recirculation and high-pressure liquid letdown applications.

“LincolnLog control valves are designed to step pressure down in stages so that we never drop below vapor pressure,” Ruth said. “Instead of cavitation containment, LincolnLogs eliminate cavitation.” ►►

More than eight years later, the first LincolnLog valve has been in continuous service without the need for any maintenance work. The initial success led to orders for more LincolnLogs and additional Masoneilan valves for critical service applications throughout the power plant. Converting over the previously installed valves to Masoneilan's high performing anti-cavitation solutions has enabled the plant to increase efficiency and meet the substantial energy demands of one of the most densely populated areas in the United States.

“Virtually every one of the power plant’s critical service valves are now Masoneilan,” Ruth said. “They’re made to handle high pressure applications, and they have been working out really well.”

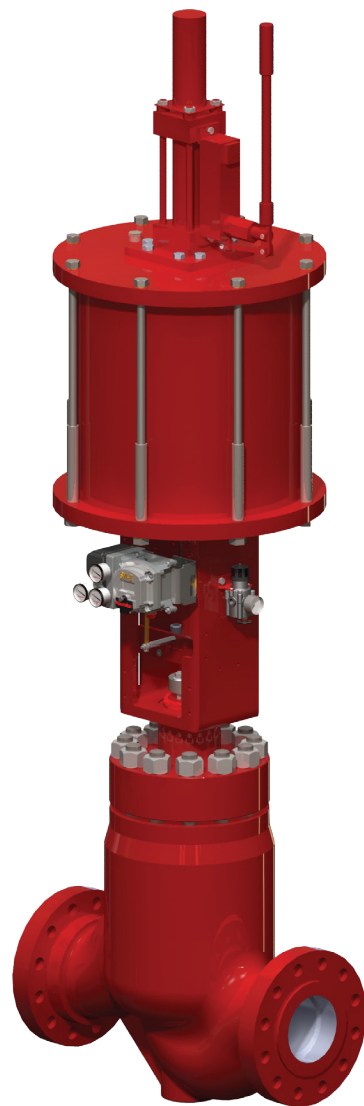
Results

- The customer’s critical service valves were failing **in as little as one year**, leading to extensive costs in repairs and replacements.
- In 2018, Eastern Controls Inc., working with the **Baker Hughes™** team, supplied a Masoneilan LincolnLog valve to replace the customer’s existing boiler feedwater level control two-way valve solution.
- The LincolnLog **has been in continuous service for eight years**, eliminating maintenance costs and unplanned outages.
- Today, virtually all critical service control valves are now Masoneilan LincolnLog.

The LincolnLog’s initial success led to an improved relationship with the customer, Ruth said. “They’ve gone all in with Masoneilan,” he said. “There wasn’t a red valve in the plant when it was built. Now, we’ve become their control valve expert.”

This success story demonstrates how Ruth and the Eastern Controls Inc. team applied their application and engineering expertise to develop a reliable solution that delivered true operational value for the customer.

Similar to other channel partners in the Masoneilan network, Eastern Controls Inc. provides factory-certified support including OEM components, onsite service, hands-on training, and post-installation analysis to support Control Valves MRO needs and maximize performance efficiencies.



Masoneilan 18400 Series Globe Style LincolnLog

