

Globe Valve Replaces Ball Valve to Save a Local Pulp Mill Over \$200,000 Per Year in Steam Costs

PULP & PAPER

Challenge

A local paper mill's batch digester blowback valves started experiencing excessive leak by, causing overpressurization. Due to the nature of this application, which pushes steam to the digester to clear out the screen, the valve seating surfaces are subject to erosion and plugging. According to mill technicians, the leak by issue caused by frequent usage had become a high priority for the mill to resolve.

Solution

Control Southern suggested that the mill swap out the existing ball valves for globe valves, which are designed for steam service and can handle multiple strokes per day. The shutoff of these valves also typically does not degrade as quickly as the shutoff for ball valves. The reduced valve capacity will also provide inherent steam savings.



Fisher EZ Globe Valves are designed for steam service and can withstand multiple strokes per day

Results

When calculating the financial results, Control Southern made the following assumptions:

50 cycles per day

1 min per cycle

Cost of steam/1000 lb: \$1.77

	Fisher EZ Globe Valve	Existing Full Port Ball Valve
Total (lb/day)	6,800	39,250
Difference (lb/day)	32,450	
Average (lb/hr)	283	1,635
Difference (lb/hr)	1,352	
Cost Savings Per Day	\$57.44	
Cost Savings Per Year	\$20,102.78	

Annual Steam Savings Total: 10 Batch Digesters x \$20,102.78 = \$201,028

