

Customized Double-Seated Ball Valve Reduces Water Leakage and Environmental Hazards in Green Liquor Dregs Filter Application

PULP & PAPER

Challenge

Hot water isolation valves installed in a local paper mill's green liquor dregs filter application were leaking excessively. This process issue likely resulted from damage to the valve seats caused by green liquor contaminants that settled in the water line. The excess water in the filter drum created a heavy water treatment load that was hazardous to the environment.

Solution

After walking down the process area and consulting with mill operations and environmental personnel, Control Southern recommended installing a Trueline double-seated ball valve with dual capabilities. The upstream seat was made of TruHard material, which would provide improved (Class VI) shutoff. A metal abrasion-resistant seat was used on the downstream side (dregs) of the valve to provide a scraping/wiping action of the ball.

During the walk-down, the Control Southern Account Manager also noticed that the mill was using a complex control scheme for the on-off device. The only equipment the mill needed to operate this valve was a solenoid linked to an on-off fail closed actuator that would automate the valve. Control Southern helped the customer recognize that their current setup could be simplified by removing the unnecessary equipment, in doing so reducing two failure points. The system overhaul gives the mill greater reliability beyond the valve solution alone.



The upstream seat provided improved (Class VI) shutoff, while the downstream seat provided a scraping/wiping action of the ball

Results

These devices were installed in the spring of 2014. According to mill personnel, there has been no leakage to date.

Total Investment: **\$5,500**

Annualized Savings/Revenue Increase: **\$15,000** (less hazardous waste to treat)