CASE STUDY • PULP & PAPER

PULP AND PAPER SUPPLIER REDUCES MAINTENANCE COST WITH GROUND AND WIRING FAULT DIAGNOSTIC

Application

Aluminum Sulfate Flow

Customer

Leading global supplier of pulp and paper products

Challenge

During mill start-up after a week-long maintenance shutdown, operators noticed the aluminum sulfate measurement was not responding as expected. Aluminum sulfate controls the pH level and additive retention in the paper. The combination of aluminum sulfate and additives is required to increase the bonding of the fibers to create a strong paper.

Correct aluminum sulfate measurement is critical to producing quality paper. Since this measurement is just upstream of the paper machine, an inaccurate flow measurement results in reduced quality and decreased paper strength.

An older magnetic flow meter on the aluminum sulfate line was replaced during the week-long maintenance shutdown. When the new magnetic flow meter was installed, it was not properly wired. Incorrect wiring caused electrical noise to be picked up by the electrodes and decreased the stability of the transmitter output.

Results

- Improved reservoir and production management
- Reduced health safety and environmental risk
- Reduced operations cost

The Ground/Wiring diagnostic reduced maintenance time allowing this mill to get back online faster.

EMERSON

PULP-AND-PAPER SUPPLIER REDUCES MAINTENANCE COST WITH GROUND/WIRING FAULT DIAGNOSTIC

Solution

To investigate the problem, an instrumentation technician was assigned to troubleshoot the meter. Since the installed meter was a Rosemount™ 8700 Magnetic Flow Meter with the ground/wiring diagnostic option enabled, the LCD immediately informed the technician there was a “Ground/Wire Fault.” With this information, the technician reviewed the wiring and found a wire’s shielding incorrectly connected to an active coil. The wires were then connected to the correct terminals, and power was re-applied to the flow meter. A correct and stable flow measurement was restored.

The ground/wiring fault detection diagnostic allowed this customer to eliminate time-consuming troubleshooting procedures by immediately directing the technician to the source of the problem. This saved the technician hours of maintenance costs. Finally, with a stable aluminum sulfate measurement, the mill was saved from producing off-spec paper.

Rosemount 8700 Magnetic Flow Meter

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