

Paper Mill Cuts Maintenance Costs on effluent by 60%

RESULTS

- 97% annual return on installed cost
- Less than 13 month payback time
- Minimum 67% longer life



APPLICATION

Effluent Water from a Paper Mill

CUSTOMER

Strathcona Paper in Ontario, Canada

CHALLENGE

This mill produces 200+ tpd of recycled medium to heavy weight clay-coated boxboard used for packaging products such as powdered detergents, hardware, and various dry and frozen foods. Approximately 500 thousand gallons per day of fresh water are used in this process and must undergo primary and secondary treatment onsite before being returned to the river. Strathcona is not permitted to discharge water with high levels of acid or salt and uses online pH and conductivity measurements to verify that the operation is continuously within regulatory limits. The original sensors used for these online measurements required periodic cleaning and calibration, which was problematic because travel time to their location was about 45 minutes each way. Jim Hearn, responsible for maintaining those sensors, wanted to save both time and money by using sensors that needed less cleaning, lasted longer, and calibrated easier.

SOLUTION

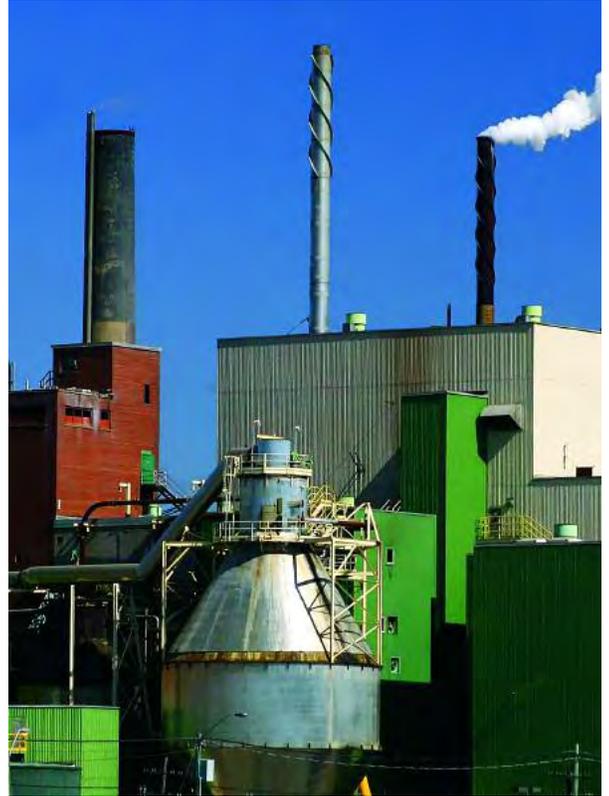
Rosemount Analytical's TUpH® model 396P pH sensor and model 226 toroidal conductivity sensor were installed in May 2005 to replace the existing units. Strathcona obtained savings by extending product lifetime, calibrating less often, and by making fewer maintenance trips.



Previous sensors were replaced every 6 months but neither of the new Rosemount Analytical sensors has needed replacement after 10 months of operation. With minimum expected lifetimes of 1 year for pH and 3 years for conductivity sensors, this corresponds to a savings of approximately \$300-\$500 per year per measurement.

The previous sensors required calibration every 3 months, but the new sensor evaluation has shown that this period could be doubled for the Rosemount sensors. Since it took two technicians an hour each to calibrate each sensor, this eliminated 8 hours of work per year.

Eliminating the two extra calibration trips to the measurement site saved an additional 6 man-hours of labor. "Strathcona prides itself on being an environmentally conscious company," says Jim, "and we're happy that Emerson Process Management sensors take some of the trouble out of this effort."



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