

## RECORDED BENEFITS

- Significantly reduced biofilm growth
- Eliminated manganese deposition
- Improved heat exchanger efficiency
- Reduced bleach consumption
- Reduced overall costs by \$187,000/year

## Pulp Mill Significantly Reduces Biofilm Growth and Eliminates Manganese Deposition

### ClearPoint<sup>SM</sup> Biofilm Detection and Control Program

#### Customer Challenge

A fluff pulp mill was experiencing black supply water and manganese deposition in its machine chests, heat exchangers and pipes. High levels of microbiologically-induced corrosion (MIC) occurred in the heat exchangers and pipes due to uncontrolled biofilm, resulting in increased maintenance and asset replacement costs.

#### Recommended Solution

Solenis recommended that the mill replace its existing hypochlorite treatment program with ClearPoint<sup>SM</sup> biofilm detection and control program. Comprised of three components—an OnGuard<sup>TM</sup> 3B analyzer, Biosperse<sup>TM</sup> CX3195 chlorine stabilizer, and Solenis' superior service—the program offers real-time biofouling measurements and automatically adjusts chemical feed to ensure effective, around-the-clock microbiological control.

#### Results Achieved

- Biosperse CX3195 specificity with microorganisms resulted in a significant reduction in Petrifilm\* counts as well as a significant reduction in biofilm thickness and growth
- Bleach consumption was reduced by 18%
- Manganese deposition was eliminated in the chests, resulting in increased efficiencies across the mill's critical heat exchangers
- Heat exchanger efficiency improved, reducing maintenance costs
- Overall operating costs were reduced by \$187,000/year

Old Heater Target			New Heater Target			
Baselining on hypo 6 weeks at 40°C/104°F 5/3/2018	Cleaning – start CX3195 5/3/2018	CX3195 6 weeks at bulk temp. (25°C/77°F) 6/12/2018	New Heater installed With temp set to 40°C/104°F 6/12/2018	CX3195 13 weeks at 40°C/104°F 9/11/2018	CX3195 16 weeks at 40°C/104°F 1/7/2019	CX3195 15 weeks at 40°C/104°F 4/22/2019
						

Reduced Manganese Deposition on Probe

All statements, information and data presented herein are believed to be accurate and reliable, but are not to be taken as a guarantee, an express warranty, or an implied warranty of merchantability or fitness for a particular purpose, or representation, express or implied, for which Solenis International, L.P. and its affiliates and subsidiaries assume legal responsibility. <sup>TM</sup>Trademark, Solenis or its subsidiaries, registered in various countries. \*Trademark owned by a third party. © 2015, Solenis.