## **CASE HISTORY**

**Chemical Processing** 



### **RECORDED BENEFITS**

- ClearPoint program delivers effective 24/7 biofilm control
- Effective treatment can be determined in a short period of time
- Early detection of biofilm enables rapid control of cooling system
- OnGuard 3B analyzer is a powerful tool for upset detection allowing early countermeasures

# OnGuard™ 3B Analyzer Utilizes Ultrasonic Probe for Early Detection of Biofilm

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

#### **Customer Challenge**

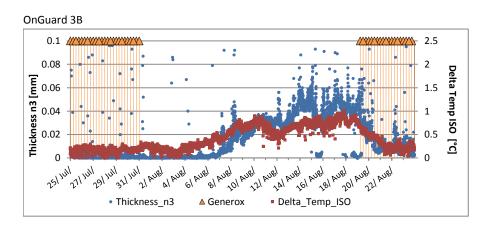
Controlling microbiological growth in cooling systems can be challenging depending on a wide variety of factors. A chemical plant in Germany runs a cooling system with tendencies for biofilm formation, which is effectively controlled using Generox<sup>™</sup> chlorine dioxide (4 shots per day, 1.5 hours each). However, process leaks and/or sudden changes in environmental conditions often lead to unexpected biofilm formation.

#### **Recommended Solution**

Solenis recommended the installation of the OnGuard 3B analyzer to provide on-line, 24/7 detection of biofilm development and biocide treatment effectiveness. To detect biofilm formation at an early stage, the OnGuard 3B uses a unique combination of ultrasonic thickness readings and the determination of heat transfer loss due to deposits.

#### **Results Achieved**

A regular shutdown of the chlorine dioxide generator was planned. After 4 days without chlorine dioxide dosage, the development of a deposit was detected by an increase in heat transfer reduction (Delta\_Temp). A dense, but thin biofilm was detected (n3). The chlorine dioxide feed was resumed with a corresponding decline in biofilm in the cooling system. Furthermore, the chlorine dioxide treatment was powerful in facilitating biofilm removal from the system, helping to restore system cleanliness.



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