

## RECORDED BENEFITS

- Improved MB control with significantly reduced biofilm growth
- Reduced *Legionella* low level positive test results
- Reduced corrosion rates
- Reduced use of corrosion inhibitor
- Eliminated need for non-oxidizing biocide

## Power Plant Improves Microbiological Control While Reducing Corrosion Rates

### Biosperse™ CX3400 Chlorine Stabilizer and OnGuard™ 3B Analyzer

#### Customer Challenge

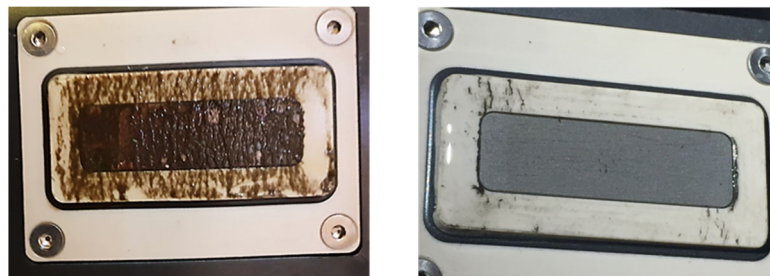
A cogen power plant located at an integrated steel mill in Asia-Pacific wanted to improve the consistency of its microbiological (MB) control program without increasing its costs. Intermittent winds transported fugitive dust into the plant's cooling towers, making consistent MB control difficult and resulting in sporadic *Legionella* low level positive tests. Positive tests required shock dosing with a non-oxidizing biocide and high levels of free chlorine, which increased mild steel and yellow metal corrosion rates.

#### Recommended Solution

Solenis recommend a comprehensive treatment program that would deliver consistent MB control and eliminate biofilm growth without degrading critical mild steel and yellow metal corrosion inhibitors. The program included Biosperse CX3400 chlorine stabilizer, a novel chemistry that effectively controls biofilm without any of the adverse side effects associated with strong oxidizing biocides, and the OnGuard 3B analyzer, a new-to-the-world monitoring device that provides the earliest detection and most accurate measurement of biofilm.

#### Results Achieved

The performance of Solenis' treatment program was closely monitored for a year and all performance objectives were confirmed achieved. *Legionella* control was significantly improved, dropping from >6 *Legionella* low level positive test results per year down to less than 1. Biofilm growth is now well managed as confirmed by the 3B analyzer. Mild steel and yellow metal corrosion rates have decreased by 33% and the plant's usage of yellow metal corrosion inhibitor and non-oxidizing biocide has been reduced by 50% and 100%, respectively.



**Biofilm growth before (left) and after (right) Solenis treatment program.**