

Case Study-

Biofilm Removal Using Trustwater Ecasol

Summary

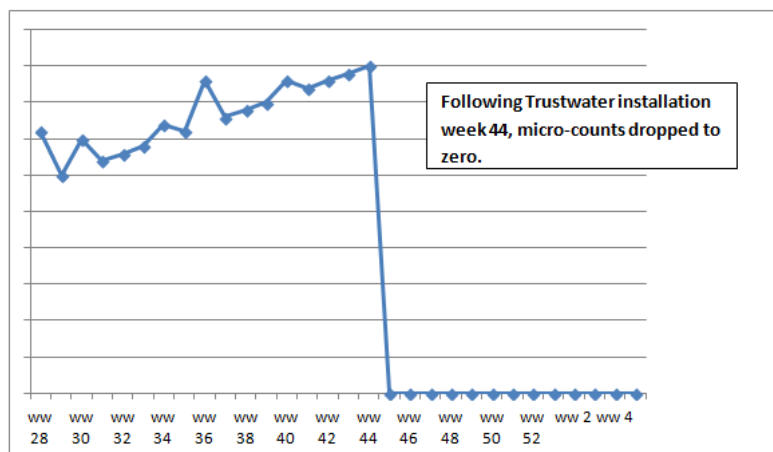
A leading food manufacturing company installed a Trustwater system following micro-counts in a closed-loop process water system due to the presence of biofilm. The Trustwater system is proving highly effective at removing and preventing biofilm growth for the food manufacturing plant with zero micro-counts recorded since installation.

Background

Prior to commissioning of the Trustwater system, the plant quality assurance team found a gradual increase of micro-count in process water. In order to identify the contamination source, much of the equipment and pipe-work was disassembled for examination. Biofilm was discovered and identified as being the contaminant. The site previously had a sodium hypochlorite water treatment system, dosing at >2ppm. This system was effective in killing water-borne bacteria but over a number of years biofilm build-up occurred. Despite increasing dosing levels of sodium hypochlorite and periodic shock-dosing, the biofilm was never fully removed and so micro-counts remained high with periodic spikes recorded. The plant contacted Corporate for guidance on the removal of biofilm and an independent consultant introduced Trustwater. It was decided to treat the process water within this closed loop circuit with Trustwater Ecasol to kill the microbes and more importantly to remove the biofilm within the system.

Approach

A Trustwater 110 generator was installed onsite along with dosing and measurement control to keep 1ppm of Ecasol maintained at all times within the closed-loop process water. The system was found to be very easily integrated with the plant's existing BMS. Training was provided to staff on the weekly checks to be performed and the micro-count was recorded. Immediately following the Trustwater installation there was a step reduction of micro-counts to zero. This state has been maintained to date for the past 15 months. As a result of this and on the advice of Corporate, the weekly sampling requirement has been reduced to a quarterly requirement.



Plant Benefits:

- Microbe-free water
- Improved staff safety
- Energy savings
- Chemical elimination
- Environmentally friendly

Result:

The installation of the Trustwater generator and the dosing of Ecasol to the water system resulted in removing biofilm and controlling the micro-count of the water. Over a period of 15 months it has been possible to reduce the dosing of Ecasol to 1ppm and maintain micro-count levels at zero. Further the non-toxic nature of Ecasol improved staff safety. The Trustwater 110 unit automatically maintains levels of Ecasol for dosing, the only requirement from staff being to place salt within the salt bucket.

Under the instruction of Corporate, the water sampling regime at this site has moved from a weekly to a quarterly interval with plans for Ecasol dosing levels to be further reduced to 0.5ppm.