

BIoGEORGE™ BG₄

BIOFILM GROWTH DETECTOR

IS YOUR WATER SYSTEM CLEAN?



Before



After



THE PROBLEM

Water systems can harbor disease-causing organisms such as Legionella bacteria. On rare occasions, pathogens such as E.coli can appear in potable waters, resulting in disease or even deaths. Maintenance of clean, biofilm-free cooling water systems or water distribution systems will eliminate the problem. Chemical treatment programs for biofouling control typically rely on the amount or concentration of biocide dosing and periodic sampling as a check for effectiveness of the treatment. Biocides provide a flexible and effective method for the prevention of microbiological growth build-up, heat transfer degradation, and microbiologically-influenced corrosion (MIC). The costs and toxicity of the treatment biocide chemicals are always a concern for plant personnel and the environment. Further, the inability to monitor effectiveness of the treatment continuously at a variety of locations hampers monitoring efforts.

BIoGEORGE™ SYSTEM DESCRIPTION

The BIoGEORGE™ BG₄ system, originally developed for and proven in power plant cooling water systems, monitors biofilm activity on the surface of a stainless steel or titanium probe continuously and in real time. Biofilm formation occurs more rapidly on the probe than on system piping or heat exchanger tubes. As a result, maintaining the probe in a clean condition assures that the pipe work, heat exchangers or other system surfaces are clean. The BIoGEORGE™ BG₄ system consists of a probe, its integrated electronics, interconnecting cable, display software, a user manual, and product support.

THE SOLUTION

Automated, continuous monitoring of biocide effectiveness at remote locations provides the system owner with a direct measure and record of biological activity and assurance that surfaces have been maintained in a clean condition. The BIoGEORGE™ BG₄ system provides a method for continuous measurements of the presence and activity of biofilms on surfaces.

Biofilm activity is indicated by an LED display in the probe controller enclosure. A GREEN light indicates acceptable conditions and no microbiological fouling; RED indicates microbiological fouling of the probe; and YELLOW indicates transition to a new status is underway (e.g., initial start-up).

Performance and data can be tracked via PC connection to the BIoGEORGE™ BG₄ system or wirelessly through Bluetooth™ and the BGConnect App. The unit operates on 110 VAC and has built-in battery backup.