

A huge amount of water is employed for paper production, and bacterial growth on surfaces in contact with the liquid (biofilm) can be a major problem, since this microbiological layer can deteriorate the quality of the paper and even damage machinery.

In this paper mill, the ALVIM Sensor was installed in a whitewater channel, far downstream of biocide application point, in order to check if the treatment was effective on the whole length of the line. Biocide treatment was applied automatically at fixed times, every 4 hours, based on staff's experience. During the first days of use, the ALVIM Biofilm Monitoring System indicated that the biocide was correctly reaching the point where the ALVIM sensor was installed (Fig. 1), and that the chosen frequency of injection was appropriate, in order to avoid biofilm growth.

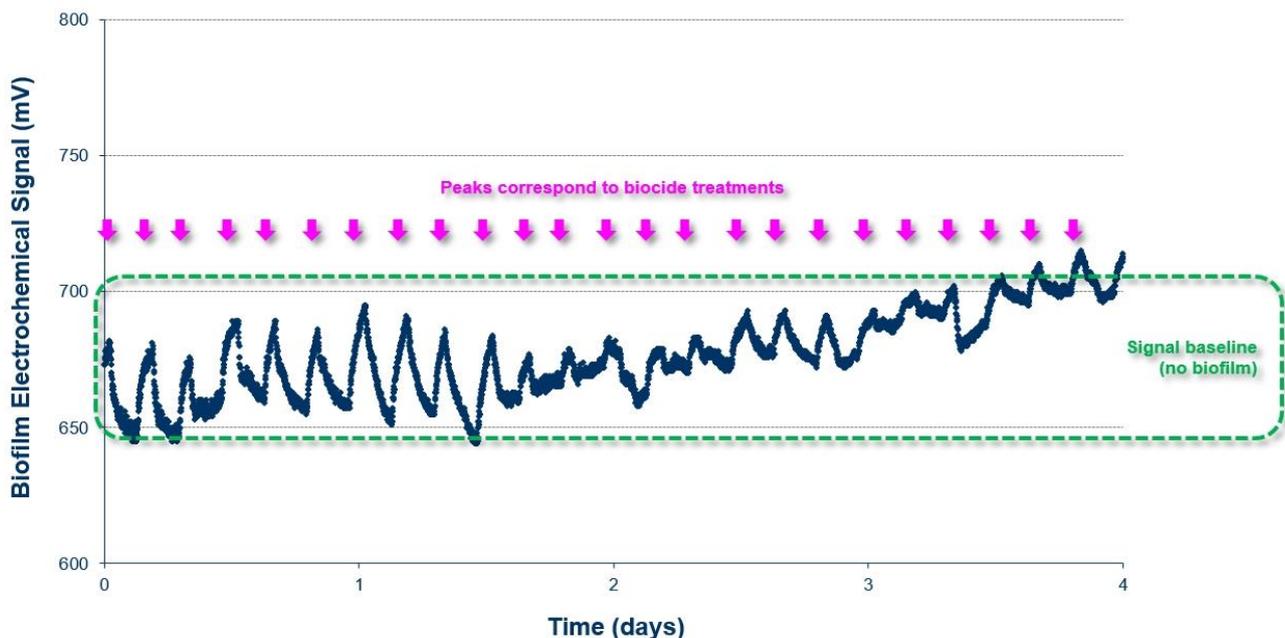


Figure 1: ALVIM response to periodic biocide treatments, during the first days of installation in the paper mill

After a couple weeks, the ALVIM system indicated that biofilm growth was taking place (Fig. 2) and, therefore, the need of a stronger or more frequent sanitation treatment.

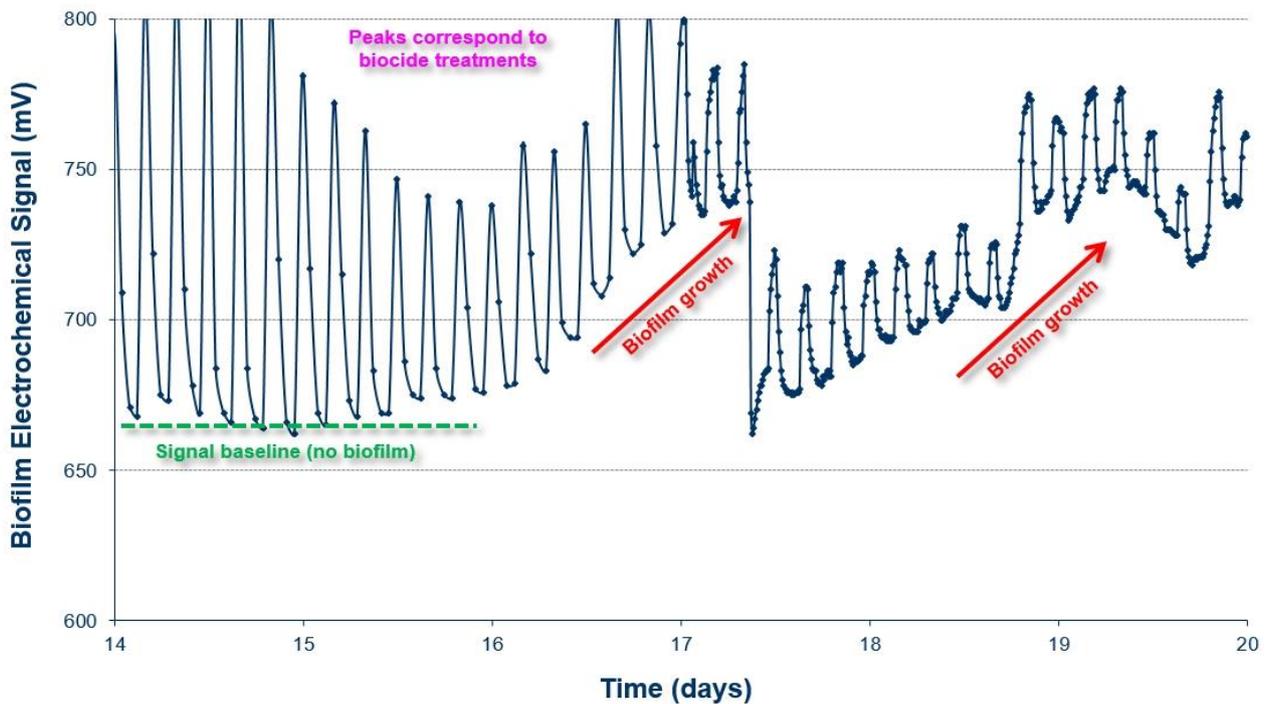


Figure 2: Biofilm growth (red arrows) detected by ALVIM sensor in the whitewater channel of the paper mill

The ALVIM technology was, therefore, able to provide a useful indication both for monitoring the distribution of biocides inside the water line of the plant and for giving an early warning signal of biofilm-related risk.

Read the full article at:

http://biofilm.online/biofilm_monitoring_paper_mill

Published on *The Journal of Science and Technology for Forest Products and Processes* Vol. 6 No. 4 (2017)

Do you have a similar problem with biofilm? Contact our experts and ask for a free custom-tailored consultancy, you will receive further information about ALVIM products and services.

The ALVIM Biofilm Monitoring System is a reliable tool for the early detection of bacterial growth on surfaces, on-line and in real time, in industrial production lines, cooling water systems, etc.

The ALVIM Technology has been developed in collaboration with the Italian National Research Council, Institute of Marine Sciences, and it is currently used worldwide in many different application fields.

Contact: Dr. Giovanni Pavanello | Phone: +39 0108566345 | Email: giovanni.pavanello@alvim.it | Web: www.alvim.it