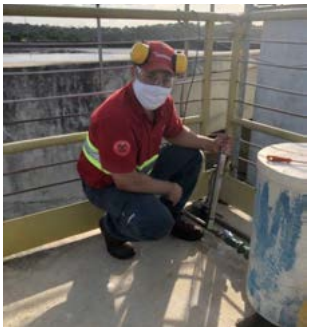
Pure high quality beer and clean wastewater

Monitoring of effluent with Viomax CAS51D at Heineken



Amadeo Diustin Detmering, Industrial instrumentalist

In beer production it is essential to strictly control the effluent

Heineken is a family-owned, independent brewer which was founded 150 years ago. They brew the highest quality beers with the focus on working as sustainable as possible. With a larger global presence than any other brewer in the business, they are able to draw strength from the diverse regions they operate in and sell to – driving consumer trends and opening up new market opportunities in the process.

"The maintenance required in combustion analyzers was frequent and at relatively high cost, today we have a robust rapid response system that fully serves us, thanks to the quality of Endress+Hauser instruments and local support. Reducing the analysis time against the combustion analyzer, each analysis took about 20 minutes, the Viomax CAS51D sensor with direct SAC measurement makes the analysis instantly."

Amadeo Diustin Detmering,
Industrial instrumentalist
Heineken Brazil

Today environmental regulations are increasingly stringent to prevent contamination of the environment. Heavy fines may be imposed if disposal with organic load is above the tolerated level by supervisory bodies. This also applies to the Heineken brewery in Brazil. With the Endress+Hauser solution, they are able to check their wastewater system at any time and ensure proper functioning.

Customer challenge

To determine, with the help of measurement technology, whether the organic load in the wastewater is within the specified limits, a joint study was carried out with Endress+Hauser. They used an intelligent, robust and easy maintenance inline sensor for measuring organic load in the waste water treatment plant to assure meeting the requirements of the discharge. The use of a sensor with stability, precision and rapid response was fundamental because of its great importance for this type of analysis to skip high peak values and to ensure a smooth operating process.

Our solution

The solution includes:

- Digital SAC sensor Viomax CAS51D
- Transmitter Liquiline CM442

With the digital SAC (Spectral absorption coefficient) sensor Viomax CAS51D it is possible to measure the organic load: COD (Chemical Oxygen Demand), BOD (Biochemical Oxygen Demand) and TOC (Total Organic Carbon). As the sensor works with a measuring wavelength of 254 nm it meets the requirements to control the treated water in breweries with highest accuracy. The sensor has been connected to a Liquiline CM442 transmitter, a controller for all parameters and applications with automatic sensor recognition and plug-&-play dynamic connection.

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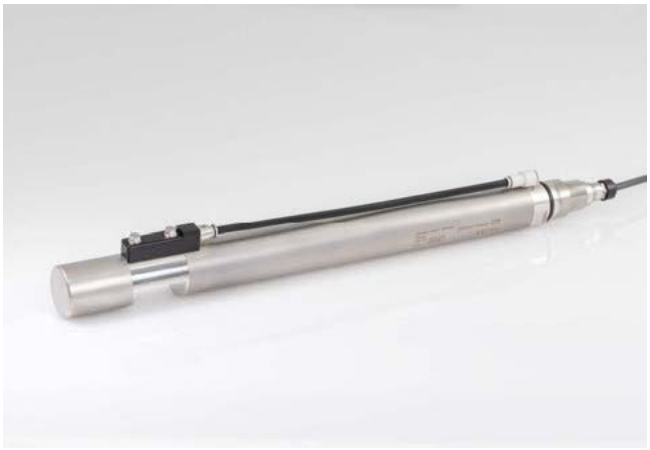
In this transmitter it is possible to have all the variations of organic load parameters on the display and to instruct automatic cleaning whenever it is needed.
The Industrial instrumentalist concludes: " It facilitated the routine. Today calibration is performed, on average, every two years and without the need for consumables whereas in the old instrument (combustion measurement) there was a constant maintenance with cleaning of the circuit of hoses and peristaltic pumps with 15% nitric acid solution. We are now able to avoid this challenging process."



Digital nitrate or SAC sensor Viomax CAS51D

Alcohols and sugars can hardly be detected in the UV-Vis range. However, this plays a minor role in the outlet of industrial wastewater treatment plants, such as in a brewery, since these substances are the first to be degraded and are accompanied by detectable substances in the event of a malfunction.

Benefits for Heineken

- Viomax CAS51D is accepted by the local supervisory body
- Reduction of maintenance costs thanks to longer maintenance intervals and no usage of consumables
- Sensor with easy maintenance/cleaning routine which is performed every 15 days due to the location of the installation point
- Single sensor reading multivariates of the process: TOC, COD and BOD
- Flexible Liquiline CM44X transmitter for expansions in the future such as dissolved oxygen measuring points
- Sensor with digital Memosens technology that doesn't show any interference by moisture with risk of lost reading of the captured parameter
- Easy on-site exchange of lamp or optical window within 2 years
- Local support and service

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