

# Measuring COD to detect inlet peaks

AT THE MUNICIPAL WASTEWATER TREATMENT PLANT SALZGITTER-NORD

## The spectral sensors of the WTW brand

Carbon and nitrogen parameters can be measured easily and without the use of chemicals by means of the optical method of the UV-VIS and UV sensors. Steps such as sampling and sample preparation, which usually take a lot of time, are omitted. Another plus is the integrated, maintenance-free ultrasound cleaning process, which minimizes the manual cleaning effort for almost all applications. With this, parameters like COD and TOC, which are otherwise elaborate and expensive to detect, can be measured in the simplest way, as shown by the following practical example:

## Measuring the COD to detect inlet peaks

The plant Salzgitter Nord is a municipal wastewater treatment plant and comprises 150,000 p/e. The IQ SENSOR NET has been used successfully there for about 6 years. In the aeration, NH<sub>4</sub>, D.O., pH, NO<sub>3</sub> as well as TSS are measured, while the process is regulated as per the NH<sub>4</sub>-N value. For the online effluent monitoring parameters such as NH<sub>4</sub>, NO<sub>3</sub>, PO<sub>4</sub> and COD are determined. As intermittent inlet peaks occurred, they planned beginning of 2013 an investment in a COD measurement after the sand trap for the monitoring of the inlet.



Aerial view of the Salzgitter plant

## Reliable measurement without the use of chemicals

After a 4-weeks trial period in mid of 2013, the plant decided to buy a CarboVis® 701 IQ from WTW a Xylem brand.

With the spectral measurement technique of this probe, it is possible, to determine quasi-continuously COD without reagents and delay in response times. The positive experience with the existing Xylem measurement instrumentation and competent support, were decisive arguments for Mr. Staebner, the wastewater treatment plant manager to purchase the sensor. The modular design of the IQ SENSOR NET network made it possible to integrate the sensor into the existing system easily. Due to the fact of the strong contamination in the inlet, a compressed air cleaning was installed in addition to the ultrasonic cleaning already on board. Since that time, with the aid of CarboVis® all inflow peaks can reliably and promptly be detected and at concentrations of 2.500 mg/l automatically notifications to the PLC are issued.



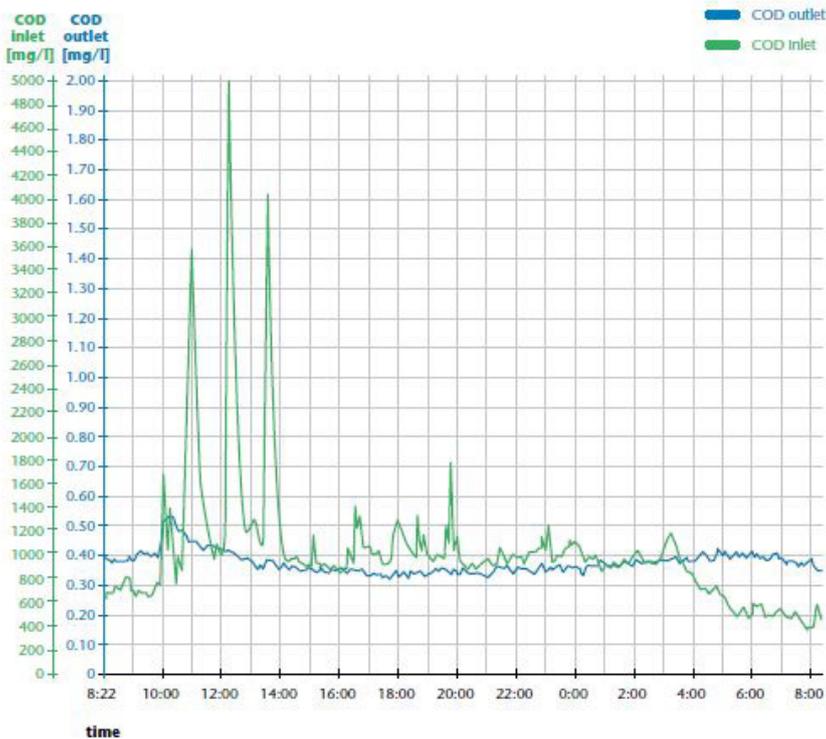
A201401

Employees of the wastewater treatment plant during the removal of the spectral sensor



Installation of the CarboVis® in the inlet

## Wastewater plant Salzgitter-Nord COD measurement in the inlet



[xylemanalytics.com](http://xylemanalytics.com)

All names are registered tradenames or trademarks of Xylem or one of its subsidiaries.  
Technical changes reserved.  
© 2021 Xylem Analytics Germany Sales GmbH & Co. KG.

Do you have further questions?  
Please contact our  
Customer Care Center:

Xylem Analytics Germany Sales  
GmbH & Co. KG, WTW  
Am Achalaich 11  
82362 Weilheim, Germany  
Phone +49 881 1830  
Fax +49 881 183-420  
Info.WTW@xylem.com

August 2021