



## The Oettinger brewery in Germany continuously monitors its industrial waste water with s::can

### Industrial Waste Water Monitoring

The s::can spectro::lyser ensures a complete monitoring of the treated waste water in the brewery's waste water treatment plant.



**OETTINGER**  
Brauerei GmbH

#### Parameters monitored:

- COD
- NO<sub>3</sub>-N
- TSS

#### Facts & Figures

**Company/Institution:**  
OETTINGER Brauerei GmbH

**Location:**  
Oettingen in Bavaria, Germany

**Application:**  
Industrial Waste Water

**s::can Partner:**  
GWU-Umwelttechnik GmbH



**Key Products installed:**  
spectro::lyser industrial,  
con::cube

#### Background

With a total output of 245.7 million gallons per year, the Oettinger group is one of the biggest brewery companies in Germany. Each year, about 2 billion bottles and cans are filled with beer, mixed beers and soft drinks. The family-owned business was founded in 1731. Its headquarters are located in Oettingen, and 1050 employees work there.

Approximately 92.5 million gallons of beer and mixed beer beverages are produced annually at the headquarters production site. This makes the brewery one of the largest brewery locations in Germany. Waste water accumulates through the production of beer and cleaning bottles, which needs to be treated in their own waste water treatment plant.

#### Challenge

With increased production, waste water has also accumulated. Hence, a WWTP was built in 1992 to relieve the municipal WWTP. From 1992 to 2009, the amount of waste water that had to be cleaned, rose from 1200 m<sup>3</sup>/d to 2700 m<sup>3</sup>/d, which corresponds to approximately 30000/99000 inhabitant equivalents. In addition, the upper legal limit for COD was decreased from 120 mg/l to <60 mg/l.

In order to comply with the maximum amounts and to be allowed to discharge the treated waste water directly into the river, the brewery had to install a continuous monitoring system in their waste water effluent.

#### s::can's solution



The only solution to control treated waste water over a long period of time was to send daily mixed and random samples to an accredited laboratory. In 2004, the Oettinger brewery opted for a more sustainable system. A real-time monitoring system was implemented using s::can's spectro::lyser, which enables them to react on unusual discharges and limit value exceedances.

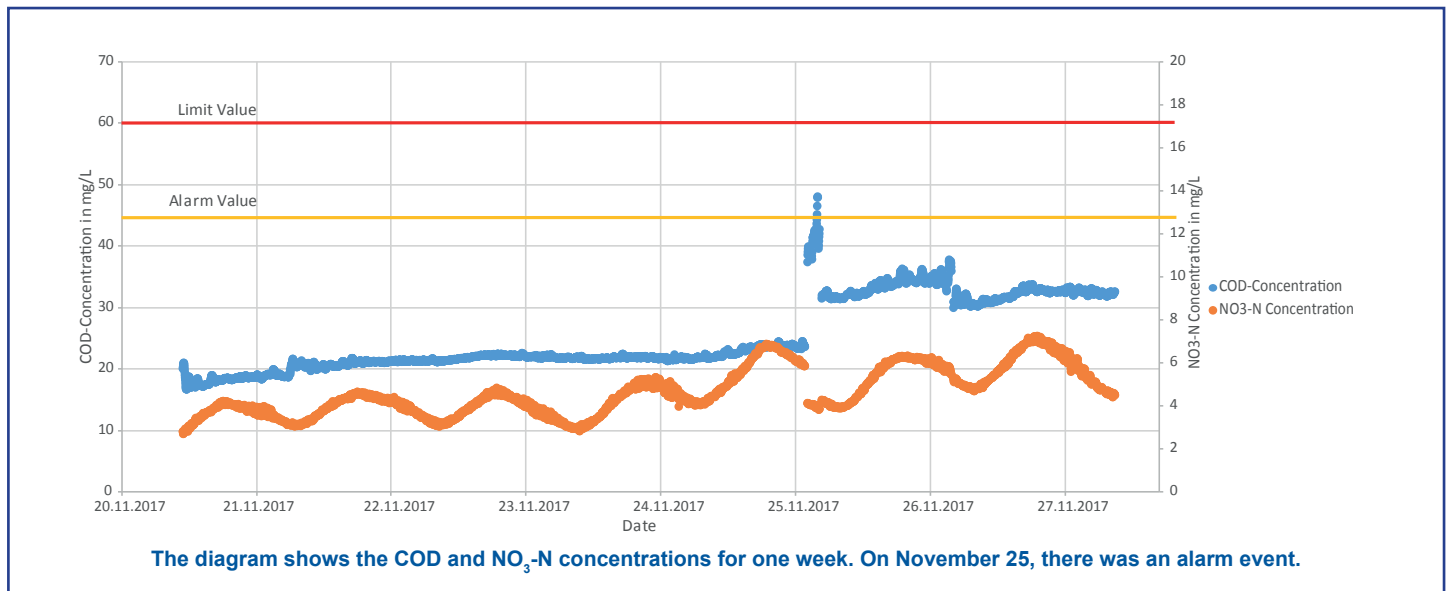
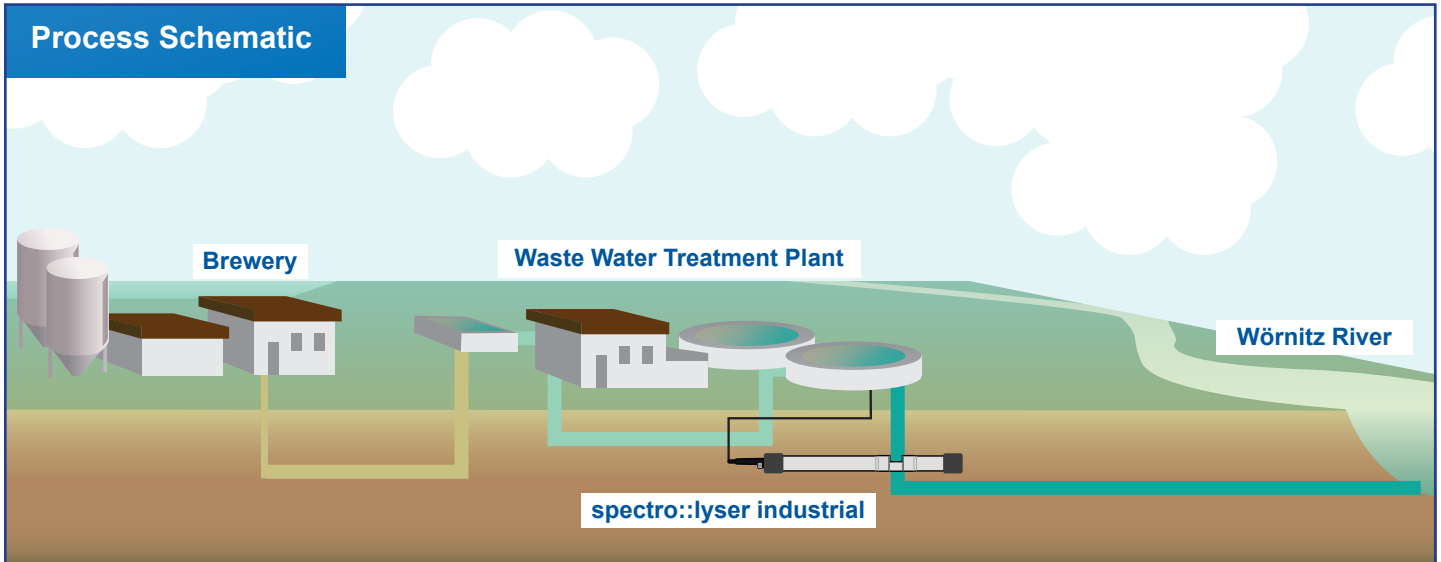
#### Benefits

Readings are available in real-time with the automated measuring spectrometer probe. A 1-minute measuring interval is set and an automatic compressed air cleaning system is used to keep the optical measuring element of the probe clean. The availability of the measured values was over 99% last year. Due to the online monitoring of the measurements and an early warning system, the personnel efforts and costs for external laboratories were cut significantly.

**„We were able to decrease the current expenses significantly by minimizing personnel efforts and reducing lab samples.“**

Jochen Brantl, Sewage Works Operator

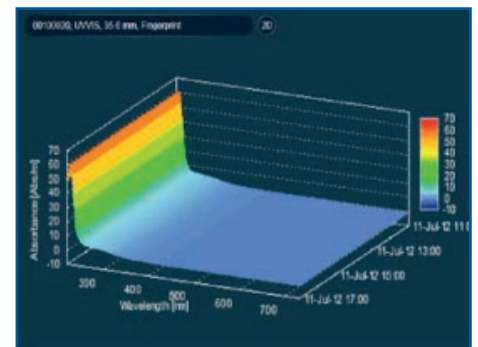
## Process Schematic



The s::can spectro::lyser industrial is a fully submersible UV/Vis spectrophotometer that measures light absorbance between 190-750nm. s::can's specialized proprietary algorithms analyze & decompose the spectral data to measure for many wastewater parameters: NO<sub>3</sub>N, COD, COD<sub>f</sub> & TSS. There are no moving parts in contact with the water & no reagents are used.



s::can's con::cube is a compact, powerful and versatile terminal for data acquisition and station control. Integrating the newest processor technology, the con::cube has very flexible options for interfacing to SCADA or any central database systems which makes it perfect for station control.



The moni::tool software is a revolutionary platform for the management of measuring stations, online probes and analyzers. Whether it is installed in a large monitoring network or as a standalone station, moni::tool's intuitive software and state of the art features are an essential backbone for sensor and station management.