

## From analysis to solution

### **KROHNE Water Solutions presents intelligent technology for water and wastewater applications**

Reliable water treatment is an essential component of product quality in many industrial processes and also increases the safety and efficiency of the facility. However, to ensure continuously high quality of feed water, for example, it is necessary to closely monitor the relevant quality parameters. This requires intelligent measuring technology.

The same is true of state-of-the-art sewage treatment plants and waterworks, which can only be run at the optimal operating point with precise measuring and control technology. To do so, analysis values must be detected and documented more extensively and accurately.

New measuring methods, technologies and devices provide increased accuracy and feature comprehensive diagnostic functions which facilitate maintenance and ensure improved operating safety.

### **Intelligent measuring technology for smooth operation**

At this year's IFAT, KROHNE introduces special technological highlights focusing on analysis measuring technology for water and wastewater applications. The spotlight here is on the new OPTISENS product line,



**OPTISENS 1000**

where particular attention was paid to details enabling smooth operation. Deposit build-up on analytic sensors, for example, has an impact on durability and measuring accuracy. For this reason, KROHNE integrated the ASR method - an automatic sensor cleaning system – into the OPTISENS 1000 chlorine sensor. An electrochemical process causes outgassing on the electrode surfaces. As a result, even tough residues are removed and maintenance intervals increased significantly.

When used in preliminary and final sedimentation or in the biology of sewage treatment facilities, sensors are subject to biological growth and ragging. In order to increase the life cycle of the sensors, an automatic spray cleaning was integrated into the sensors of the OPTISENS 2000 series. The air or water flushing guarantees optimal measuring accuracy over long periods of time. The large sensor diameter - without any dead legs - prevents annoying ragging.

It is also necessary for wastewater applications that the handling be as easy as possible, both during the start-up and for future operation. One example of this is ammonium and nitrate measurement with the ISE (ion-selective electrodes) method. The OPTISENS 2080 measuring system directly and continuously records the ammonium and nitrate concentration, especially in the biological treatment phase of communal sewage treatment plants. Thanks to directly immersed electrodes, difficult sample processing and reagent intermixtures are eliminated. In addition, the easy-to-install OPTISENS 2080 features intelligent functions such as compensation of interfering ions, self-monitoring and automatic cleaning.

When it comes to the OPTISENS 1050 turbidity measuring system, handling has been made considerably easier thanks to reusable standard cuvettes for calibration.

The cuvettes contain turbidity standards with the values 0.02, 10 and 100

FNU and are simply inserted into the measurement chamber instead of the measuring cuvette.

This means that calibration takes just a few minutes. There is no longer a need for liquid calibration standards, which are difficult to handle and susceptible to errors.

### **Customer-specific solutions and special parameters**

In addition to the standard products, KROHNE Messtechnik provides a variety of system components such as sampling devices, mounting plates and housings which can be used to expand sensor systems according to customer requirements.

KROHNE offers measuring systems for the following special parameters as well:

- Hydrogen peroxide and ozone measurement in disinfection applications,
- Fluoride and sodium measurement in drinking water applications,
- Chloride, ammonium, nitrate, calcium, hardness and copper in water applications.

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