# Monitoring of drinking water disinfetion

## The company

The public utility Trier (SWT) supplies approx. 100.000 habitants in the service area Trier with drinking water. Furthermore, the association of munipalties Schweich, Ruwer and Trier-Land receive drinking water from the water supply works Irsch and Kylltal, so that SWT supplies more than 160.000 people in and around Trier with drinking water.

## The problem

The untreated water from 24 deep wells alongside the river Kyll are processed in the water supply works Kylltal. First the well water passes over vertical slats. The undesired contents (iron, manganese, etc.) are removed in a following filtration step. To ensure that the water fulfills the hygiene demands of the German drinking water ordinance even at the final taps, it is disinfected with chlorine dioxide. The dosage is controlled by concentration.

## The challenge

The operator needs representive values with a resolution of 1 µg/l and measures in a range of 0 to 1000 µg/l with an accuracy of 10 µg/l. Maintenance requirements should be low.

## Customer´s feedback

The measuring system Krypton K CLO2 reacts directly to changes in the chlorine dioxide concentration and this with decidedly shorter response times than the other tested systems. The handling is self-explanatory. Expenditure of time and money for maintenance are clearly reduced by the integrated automatic cleaning.
We have bought the system after the test and are going to get a second system for another water supply works, in which the raw water of the Riveris-barrage is processed.
The company Dr. A. Kuntze has proved a competent partner. We were very pleased with both the measuring system and the service of Dr. A. Kuntze.

Hans-Georg Fischer, Instandhaltung, EMSR-Technik

## Our solution

The chlorine dioxide measurement is made with the measuring system Krypton K ClO2 of Dr. A. Kuntze. This is a pressure- proof (up to 6 bar at 20°) amperometric measurement with automatic electrochemical sensor cleaning. The open metal electrodes are in direct contact with the water and are being cleaned automatically once per day to maintain the original signal strength and reduce the recalibration requirements.