

Measuring technology for sustainable network expansion

Solutions for ecological groundwater management

HÖLSCHER

Hölscher Wasserbau is the market leader for networked groundwater solutions in Europe and specializes in sustainable groundwater management for infrastructure projects. For the A-Nord project, Hölscher is responsible for lowering the groundwater level along the power line in a safe and environmentally responsible manner.

"Water neutrality can only be achieved if we know exactly how much water we extract, treat and return. Precise measuring technology creates the necessary transparency for this and forms the basis for our goal of water-neutral operation by 2030."

Robin Korte
Water neutrality manager
Hölscher Wasserbau GmbH



Collaboration between Hölscher Wasserbau and Endress+Hauser.

The energy transformation needs high-performance networks: The A-Nord high-voltage direct current power line brings wind energy from the North Sea to the consumption centers. Hölscher Wasserbau uses professional groundwater management to ensure that cables are routed safely and the environment is protected – with support from state-of-the-art measuring technology from Endress+Hauser.

The customer requirement

During construction of the A-Nord power line, Hölscher Wasserbau has to move large quantities of groundwater – and strictly adhere to environmental regulations in the process. Pumping water out in an uncontrolled manner can dry out the ground, harm bodies of water and damage vegetation. The German Regulation on the Protection of Surface Waters (OGewV) therefore demands careful treatment and seamless documentation of the water quantities. In addition, remote

discharge points without a power supply make it difficult to use conventional measuring technology – and place stringent requirements on the devices used.

Our solution

To meet the everyday construction requirements reliably, Hölscher Wasserbau counts on precise measuring technology from Endress+Hauser. A total of 34 devices continuously collect data on the extraction, treatment-, and reintroduction of groundwater along the project section. A central role in this is played by Promag W 800 – an electromagnetic flowmeter that documents every liter and thus enables the legally required proof as well as compliance with ecological standards. Thanks to a battery with a long life, the device operates autonomously for up to 15 years and remains dependable for use even under adverse conditions such as wetness, mud and fluctuating temperatures.

Endress+Hauser 

People for Process Automation

The integrated Bluetooth interface allows for mobile access and configuration of the measured values via the SmartBlue app. This makes it easier to handle on-site and ensures that the measurements can be continued without interruption, even when the devices are regularly relocated. The system is augmented by Promag W 10 for conducting measurements in iron removal systems and by the Cerabar PMC21 pressure transmitter for monitoring the pressure conditions.

The result

- Legally compliant documentation of the water quantities
- Protection of ground, vegetation and bodies of water
- Autonomous operation without an external power supply
- Long service life, even under adverse conditions



Promag W 800 measures the quantity of groundwater.

Devices used

- **Proline Promag W 800**
Flowmeter for precise measurement and documentation of the groundwater quantities
- **Proline Promag W 10**
Measurement of the flow rate in iron removal systems
- **Cerabar PMC21**
Pressure transmitter for monitoring pumping and filtering processes

www.endress.com/PromagW800



One jointing pit is located every kilometer. The power cables are routed into the empty pipes via the jointing pits.



Use of iron filters for water treatment (removal of iron from the water)

www.addresses.endress.com