

Emerson Smart Wireless Transmitters Monitor River Water Temperatures at Lenzing Fibers

BENEFITS

- Improved the reliability and availability of the measurements meeting local government environmental regulations
- Wireless network eliminated the need for costly trenches
- Reduced operations costs by eliminating the number of trips to the river



CHALLENGE

Lenzing Fibers is the world's largest producer of Tencel® fibers. The Heiligenkreuz fibers plant uses water drawn from a local river for cooling purposes. Local environmental regulations require that the water returned to the river must not be more than 3 degrees Celsius higher than the water extracted, and that the company must maintain a constant check and record of the water temperature at both inlet and outlet points. Prior to the regulation being introduced, Lenzing was already monitoring the water temperatures manually involving daily visits to the river. However to meet the environmental regulation there was a need to improve the reliability of the results and for these measurements to be easily stored and be made readily available for inspection.

An online measurements solution was required, but because of the distance of the River Lafnitz from the control room and the fact that the public are free to walk by the river, it would have been necessary to dig a trench for the cabling and this would have been very expensive.

SOLUTION

Emerson Process Management's Smart Wireless technology has been successfully applied to monitor river water temperatures. The temperature of the water extracted from the river is transmitted wirelessly via Emerson's Rosemount® wireless temperature transmitter, to a Smart Wireless Gateway. The gateway is positioned on an external wall of the pump station control room, 200 meters away. A second wireless transmitter is installed where water is returned to the river, and a third transmitter is 200 meters downstream where it measures the temperature of the remixed water after the return point.

“We would have had to dig a trench for the cabling which would have been very expensive. The cost of installing wireless is much lower and has made this project possible.”

Wolfgang Gotzi

Head of Automation and Maintenance
Department, Lenzing Fibers

SMART WIRELESS APPLICATIONS

The Smart Wireless network is integrated into Lenzing Fibers' existing control system and the temperature information is stored in a data historian in order to meet the requirements of the environmental regulations. Emerson's AMS® Suite: Intelligent Device Manager is used to manage the new Smart Wireless devices, enabling the technicians to configure the devices, run diagnostic checks and monitor alarms and alerts. AMS Suite is also used to manage and store calibration information.

RESULTS

Emerson's Smart Wireless has provided a cost effective and highly reliable online measurement solution, enabling the company to reduce operations costs by eliminating the number of trips to the river and to streamline reporting, thereby meeting local government regulations related to the temperature of water discharged into rivers and watercourses.

“The Emerson technology was both easy to install and integrate and has been extremely reliable in terms of data transfer. We are currently looking at other applications where Smart Wireless can be applied.”

Wolfgang Gotzi
Head of Automation and Maintenance
Department, Lenzing Fibers



Emerson's Smart Wireless solution monitors river water temperature at the Lenzing Fibers mill.

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