

Wireless Conditioning Orifice Flow Meters Reduce Project Cost and Improve Water Management System

RESULTS

- Increased installation flexibility and reduced installation costs by 25 percent
- Automated accurate flow measurement provided visibility and better management of overall energy system



The flow rates were consolidated across the entire power plant, allowing visibility and better management of the water system.

APPLICATION

Water flow rate measurement in a coal power plant

CUSTOMER

A coal power plant in China

CHALLENGE

A large coal power plant in China with an overall capacity of around 3280MW aimed to better manage their water system as part of the government's efforts to improve energy efficiency and reduce waste disposal.

The power plant planned to add new flow meters to six measurement points, including the final stage water treatment process, municipal sewage treatment, recycled water disposal, municipal usage, fire extinguish usage, and boiler water supply.

The challenge the customer faced was installation complexity, cost, and time required to lay the cables and trays in the existing facility. Secondly, in some locations, there wasn't enough straight pipe run for accurate flow rate measurement.

SOLUTION

Fourteen sets of Rosemount™ 3051SFC Wireless Compact Conditioning Orifice Plate Flow Meters were installed. They monitor water flow rate at dedicated locations. The flow rates were consolidated across the entire power plant, allowing visibility and better management of the water system.

An additional benefit of wireless DP flow measurement is that it helped automate water flow rate process information, which is directly



Rosemount 3051SFC Wireless Compact Conditioning Orifice Plate Flow Meter

available via the distributed control system (DCS). The signal is sent to a DCS through the wireless gateway without laying additional cable, cable trays, and I/O cards.

The Rosemount Conditioning Orifice Plate utilizes an advanced four-hole design to improve accuracy while reducing the requirements for upstream straight piping to two pipe diameters.

The Rosemount Conditioning Orifice Plate utilizes an advanced four-hole design to improve accuracy.

RESOURCES





Rosemount Flow Measurement

emerson.com/en-us/automation/measurement-instrumentation/flow-measurement

Rosemount 3051SFC Wireless Compact Conditioning Orifice Plate Flow Meter

<https://www.emerson.com/en-us/catalog/rosemount-sku-3051sfc-wireless-conditioning-orifice-flowmeter>

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