

Annubar MultiVariable Flow Meters Reduce Operating Costs and Project Cycle Time in Steam Flow Measurement

RESULTS

- Reduced installation and operating costs by 30 percent
- Reduced project cycle time by 300 man-hours



APPLICATION

Wireless measurement of steam energy flow in steam distribution application

CUSTOMER

A coal power plant that supplies steam to end users in China

CHALLENGE

A power plant in China that supplies steam to a nearby industry park wanted to accurately calculate steam energy (calorific) flow, which is chargeable to customers.

The power plant faced two challenges: first, their customers were located at varying distances across the length and breadth of the industrial park, resulting in a required complicated network of cables that were difficult to lay. Second, due to the diverse locations, it was very costly and time consuming to lay the cables.

SOLUTION

The customer chose to install more than 20 Rosemount™ 3051SFA Annubar™ Flow Meters with Rosemount 3051S MultiVariable™ Transmitters and Emerson Wireless 775 THUM™ Adapters. WirelessHART® signal is transmitted from THUM Adapters through the gateway and further assisted by General Packet Radio Services (GPRS) before received by a distributed control system (DCS) without any required cabling. Flow rate from different end users were consolidated, allowing for better management of the steam energy.

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measurement. The instrument measures differential pressure, static pressure, and process temperature in a single device while dynamically calculating mass flow 22 times per second within the transmitter.

Additionally, the Rosemount 3051SFA Annubar Flow Meter eliminated impulse lines, thereby simplifying installation and reducing potential leak points. Rosemount Annubar flow meters measure multiple variables and are engineered with an integrated thermowell for temperature measurement. Its patented T-shaped sensor is capable of obtaining measurements via a single pipe penetration while maintaining a small profile in the pipe to reduce permanent pressure loss and increase energy savings.

This solution helped the power plant reduce complexity, improve execution time, and most importantly help reduce the overall cost of project deployment.

RESOURCES

Rosemount Flow Measurement

emerson.com/DPFlow

Rosemount 3051S MultiVariable Transmitters

emerson.com/en-us/catalog/rosemount-sku-3051s-multivariable-transmitter

Rosemount 3051SFA Annubar Flow Meters

emerson.com/en-us/catalog/rosemount-sku-3051sfa-annubar-flow-meter

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Global Headquarters

Emerson Automation Solutions

6021 Innovation Blvd.

Shakopee, MN 55379, USA

 +1 800 999 9307 or +1 952 906 8888
 +1 952 949 7001
 RFQ.RMD-RCC@Emerson.com

Europe Region

Emerson Automation Solutions Europe GmbH

Neuhofstrasse 19a P.O. Box 1046
CH 6340 Baar, Switzerland

 +41 (0) 41 768 6111
 +41 (0) 41 768 6300
 RFQ.RMD-RCC@Emerson.com

Middle East and Africa Region

Emerson Automation Solutions

Emerson FZE P.O. Box 17033,
Jebel Ali Free Zone - South 2
Dubai, United Arab Emirates

 +971 4 8118100
 +971 4 8865465
 RFQ.RMTMEA@Emerson.com

Asia Pacific Region

Emerson Automation Solutions

1 Pandan Crescent
Singapore 128461

 +65 6777 8211
 +65 6777 0947
 Enquiries@AP.Emerson.com

00830-0400-4803, Rev AA