

National Natural Gas Distributor Reduces Project Cost and Improves Reliability with Improved Temperature Measurement

RESULTS

- Reduced project cost
- Shortened project schedule
- Improved reliability
- Improved measurement accuracy

APPLICATION

Surface temperature control in tanks and pipes

CUSTOMER

Enagas, the national natural gas distributor for Spain

CHALLENGE

Enagas is implementing a multi-year plan to reduce cost and improve speed of project execution. As part of a plant expansion, Enagas needed to implement cost effective temperature measurement on storage tanks, boiloff tanks and pipes. Some of the measurements were cryogenic.

In an earlier project phase, Enagas installed 3-wire PT100 RTD's wired to a multiplexer in the control room to monitor temperatures in two tanks. The combination of long wire runs and multiplexers suffered from noise and measurement instability. If one RTD had a problem, all the RTD's were affected. This compromised the measurement accuracy. Enagas needed to solve the problems on the installed measurement points, and find an accurate, reliable and cost effective solution for the remaining two tanks.

The measurement errors increased cooling costs and caused excess natural gas boiloff. Correcting the problem by retrofitting with 4-wire RTD's would have resulted in high project cost and a lengthened project schedule for Enagas.



Enagas reduces project cost and improves reliability with Rosemount 848T temperature monitoring.



Figure 1. Rosemount 848T FOUNDATION™ fieldbus Temperature Transmitter

SOLUTION

Enagas replaced the multiplexers in the control room with Rosemount 848T FOUNDATION fieldbus temperature transmitters. This solved the noise and instability problems they were experiencing on the first two tanks.

The transmitters on the remaining tanks were installed close to the tanks and pipes to shorten sensor wiring lengths. The number of wires run from the process to the control room for the remaining tanks was reduced over 95% using the Rosemount 848T.

The solutions provided by the Rosemount 848T resulted in substantial business benefits for Enagas. The 848T temperature transmitters delivered a 2 °C improvement in accuracy. This led to lower cooling costs and reduced boiloff.

In addition, the 95% reduction in wires to the control room for the remaining two tanks significantly reduced project time and cost. The faster project execution and lower cost Enagas achieved moved them closer to achieving their overall improvement goals.

RESOURCES

Rosemount Temperature

<http://www.emersonprocess.com/rosemount/products/temperature/index.html>

Rosemount 848T Products Data Sheet

<http://www.emersonprocess.com/rosemount/document/pds/4697b00n.pdf>

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