

ControlWave™'s Custom Programming Delivers Continuous Monitoring of Steam Trap Stations

RESULTS

- Monitored the steam trap pit for water levels and temperatures
- Met governmental requirements for continuous trap station monitoring
- Replicated SmartSync communications protocol



APPLICATION

Steam traps for condensate collection

CUSTOMER

Operator for a world-class, city-wide steam system

CHALLENGE

Steam trap locations are considered very hazardous, necessitating minimal human exposure. Having the steam trap remotely monitored using a Remote Terminal Unit (RTU) and a SCADA system helped meet that need. There are approximately 850 locations spread over 100 miles of steam piping and serving nearly 2,000 buildings. Devices are placed in environments with high humidity in underground locations, requiring an enclosure rating suitable for submersion. RTUs were required to communicate to the existing host system.

“The ability to match the existing communication protocol was paramount in keeping the project cost-effective.”

SOLUTION

All electronics at each site are housed within an IP68-rated enclosure. Emerson's ControlWave™ Micro uses a mixed discrete I/O card and a ModBus to thermocouple I/O module for monitoring of end devices. A CDMA Modem with a street-level mounted remote antenna provides communication with the host device. The ControlWave Micro communications program was modified using generic serial function blocks for data acquisition. The result yielded the custom communication protocol needed by the client in order to allow continued use of their host system.

Global Headquarters

North America and Latin America

Emerson Automation Solutions
Remote Automation Solutions
6005 Rogerdale Road
Houston, TX, USA 77072
T +1 281 879 2699
F +1 281 988 4445

Europe

Emerson Automation Solutions
Remote Automation Solutions
Unit 1, Waterfront Business Park
Dudley Road, Brierley Hill
Dudley, UK DY5 1LX
T +44 1384 487200
F +44 1384 487258

Middle East and Africa

Emerson Automation Solutions
Remote Automation Solutions
Emerson FZE
PO Box 17033
Jebel Ali Free Zone - South 2
Dubai, UAE
T +971 4 8118100
F +971 4 8865465

Asia Pacific

Emerson Automation Solutions
Remote Automation Solutions
3A International Business Park
#11-10/18, Icon@IBP, Tower B
Singapore 609935
T +65 6777 8211
F +65 6777 0947

www.Emerson.com/RemoteAutomation



RemoteAutomationSolutions



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Remote Automation Solutions Community



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