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.

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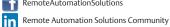
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