

Monitoring LNG Operation for Optimal Performance

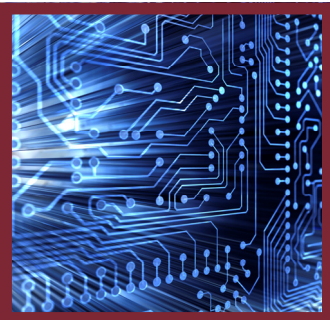


SPX Cooling Technologies turned to ArgusON to help them design and develop a remote monitoring system for their latest innovation - a heating tower. SPX Cooling developed a unique direct contact heating tower, called an Atmospheric Heat Vaporization System (AHVS). This innovative system used by the Liquid Natural Gas (LNG) industry reduces energy consumption and smoke stack emissions by as much as 90%. To ensure optimal performance of the AHVS,

SPX Cooling identified the critical functions which must be monitored to maintain efficient operation and minimize operating expense. The ArgusON team helped to determine the best method of capturing the needed information and worked to develop the hardware solution.

How These Challenges Were Solved

HARDWARE



Measuring over 6 football fields long and 8 stories high, the amount of conduit necessary to outfit the heating tower with sensors became cost prohibitive. ArgusON researched and identified the best wireless sensors for the project and incorporated the ModBUS protocol into the custom designed hardware.



COMMUNICATION



Determining the best method of data transport was an important part of this project. Since there was limited access to wired line at the site, it was necessary to use a wireless cellular network. This also alleviated any security concerns this oil and gas site would have from connecting directly to the local area network.



**Getting Information From
The Field To Your Fingertips**



WHO

SPX - ArgusON

SPX - Cooling
Technologies

WHAT

ArgusON Monitoring
Solution

Atmospheric Heat
Vaporization System

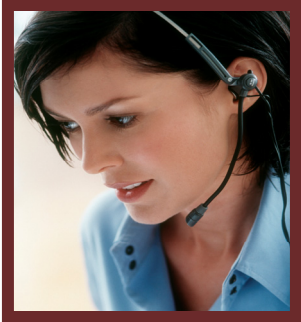
WHY

- Reduce installation costs
- Reduce operating costs
- Provide remote telemetry of system operation

RESULTS

- Complete wireless installation, no cabling between sensors and gateway
- Able to calculate efficiency in near real-time
- Anticipate when maintenance is needed through data trending

NATIONAL OPERATIONS CENTER



The SPX Cooling Technologies device was designed as a self contained solution – their engineering group manages all aspects of the heating tower through the custom web interface, eliminating the need for most NOC services. The NOC still is available to provide technical support and communication troubleshooting.



DATA WAREHOUSING

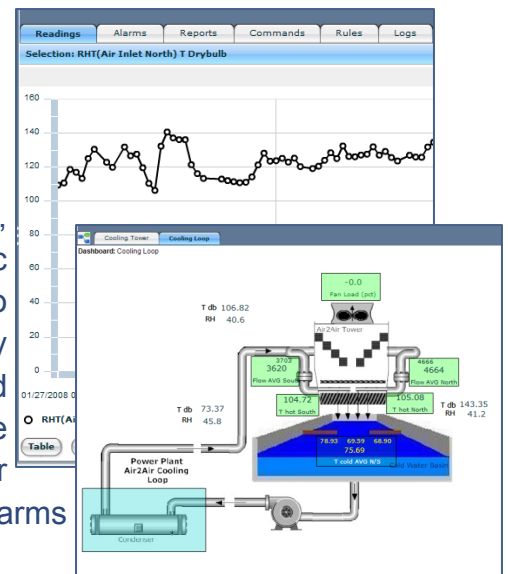


Trend data and analytics were necessary to provide SPX Cooling engineers the necessary information to make data driven decisions regarding operational efficiencies, predictive maintenance, and optimizing tower performance. Therefore, a data storage frequency was chosen to support the amount of data needed to give accurate readings.

DATA DELIVERY



A third party application platform, SensorLogic, was integrated into the solution. SensorLogic and ArgusON developed customized charts so the collected data could be displayed in a variety of formats. Additionally, custom functions and algorithms were created to provide iterative baseline data for comparison. Upper and lower control limits can be set as operating parameters and generate alarms when the tower falls below optimal performance.



ArgusON, An SPX Brand
332 Nichol Mill Lane, Franklin, TN 37067
866-459-4102 • 615-503-2000

www.arguson.com

