PPG's Temperature Measurement Goes Wireless

PPG Industries has installed and commissioned Emerson Process Managements Smart Wireless solution at its expansive Chemical Division facility in Lake Charles, Louisiana. The production installation follows field trials of Emersons self-organizing wireless networks conducted by a PPG cross-functional process and corporate IT personnel team. The team verified the reliability and coexistence performance of the network, and also deployed it in the plant.

"When Emerson first approached me with their industrial wireless solution, they said â€˜Were plug and play, said Tim Gerami, senior design engineer at PPG. "I have to admit I laughed; nothing Id seen so far was that easy. But Im a believer now. Five minutes after installing it, the wireless network came to life. Its been there ever since."

The plants Smart Wireless network uses 10 wireless Rosemount transmitters for pipeline and steam header temperature measurement, which enables operators to watch for cold spots and adjust steam throughput. PPG also plans to use the Smart Wireless solutions to do temperature profiling of the entire plant, enabling load sharing and balancing to maintain superheated steam plant-wide.

PPG has also commissioned eight wireless Rosemount transmitters on the self-organizing mesh for tank level measurements to provide backup of primary radar level measurements, helping ensure level control.

Wireless transmitters allow PPG to install instrumentation that would normally be cost-prohibitive in the plant that covers approximately 765 acres and is dense with pipes, buildings, and equipment. PPG estimates installation costs for wired instruments that include near $20 per foot for wiring and conduit. These wireless measurements have the potential to increase process reliability and provide low-cost redundant measurement.

Emersons Smart Wireless solution is an extension of the PlantWeb digital plant architecture, combining highly reliable, smart monitoring devices with wireless transmitters in an innovative self-organizing mesh network that automatically adapts as device points are added or removed, or obstructions encountered. The network, which uses Time Synchronized Mesh Protocol (TSMP) technology, has been extensively tested in real-world environments.

PPG is using wireless to make operational improvements by capturing and using new data, and is also anticipating cost advantages.

And what about "maintenance on the Emerson network?" questioned Reese Borel, process control specialist at PPG. "I havent had to do any. It just runs."

More information is available at www.emersonprocess.com.

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