

# Emerson's Smart Wireless Technology Enables Sun Chemical to Improve Product Quality, Meet Air Permit Requirements

## BENEFITS

- Smart Wireless enables easy compliance with environmental regulations
- Robust network of Rosemount® DP wireless transmitters reduces product rejects
- Smart Wireless was easily installed and integrated with the company's PLC

## CHALLENGE

Sun Chemical, the world's largest producer of printing inks and pigments, needed a way to improve ink quality and collect additional data in compliance with its air permit classification at its Kankakee, Ill., facility.

## SOLUTION

Sun Chemical is using Emerson's Rosemount® wireless DP transmitters and a Smart Wireless Gateway to deliver reliable, continuous process data from two applications to its PLC.

In the first application, the devices measure differential pressure on filter housings used in ink production. The pressure changes as the filters become clogged with particles. Alarms sent to operators signal when filters should be changed. Periodic staff rounds to check gauges on the filter housing and record the data manually are no longer necessary.

The second application enabled Sun Chemical to be compliant with a modified air permit classification by quickly establishing a cost-effective monitoring network to measure vapor stream from solvent vent condensers at multiple locations on roofs across the facility. Running conduit for a wired network would have been physically difficult and more expensive.



*“With these points spanning the entire site, the multiple roof elevations, and special electrical classifications, a wired solution would have been a challenge. Emerson's ‘peer to peer’ communication between the wireless instruments gave us a robust solution.”*

**John Dwyer**  
Process Engineer, Sun Chemical

### RESULTS

Smart Wireless helps Sun Chemicals prevent over-pressurizing the filter housing, which enables them to provide better quality ink to customers, and save thousands of dollars in eliminating material rejects.

With points spanning the entire site, the multiple roof elevations, and special electrical classifications, a wired solution would have been a challenge. But, Emerson's 'peer to peer' communication between the wireless instruments gave Sun Chemical a robust solution, and the network becomes more secure and reliable as more instruments are added.

Sun Chemical easily installed the Smart Wireless technology and Emerson helped to integrate the network with the company's PLC. The self-organizing network has been operating without problem since commissioning. Now that the network is established and more monitoring points are available, the plant can easily fulfill its desire to pick up more process monitoring data.

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