Emerson's Smart Wireless technology monitors water usage at GlaxoSmithKline

RESULTS

- Able to clearly identify water usage for different areas of the plant
- Significant cost of new power and data cables avoided
- Easy and inexpensive to add additional measurement devices without the need for new cabling

"Whenever we look to improve the plant with new equipment, we are always looking to minimise capital expenditure and Smart Wireless can help achieve lower costs"

Emmett Martin,
Site Services & Automation Manager
GlaxoSmithKline

APPLICATION

Monitoring mains and potable (drinking) water usage

CUSTOMER

GlaxoSmithKline – Cork, Ireland

CHALLENGE

The Cork site is a strategic manufacturing plant that produces a range of bulk active ingredients for use in the formulation of prescription drugs. The existing water storage facility was too small and had no measurement instrumentation in place. Two new storage tanks were installed along with a new pipework infrastructure. The tanks are located around 300 metres from the main control room and there was no existing cabling in place. A wired installation would have required new power and data cables to be buried in trenches. By adopting a wireless solution, these significant costs could be avoided. However there was no line of sight between the location of the transmitters and the ideal position for a gateway.

SOLUTION

GlaxoSmithKline selected Emerson's Smart Wireless self-organising technology, which does not require line of sight. If there is an obstruction, transmissions are simply re-routed along the mesh network until a clear path to the Smart Wireless Gateway is found. Ten Smart Wireless devices were installed including six Rosemount pressure transmitters, two Rosemount flow transmitters and two Rosemount level transmitters. The Smart Wireless technology integrates seamlessly with the existing automation equipment.

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Flow data is transmitted every 30 seconds and pressure and level data every 300 seconds to a Smart Wireless Gateway strategically positioned on the control room roof. This is connected using a serial connection to the existing DeltaV™ system that controls the plant utilities. From here the flow and pressure measurements are sent to a data historian and are available to plant operators for regular monitoring and reporting.

The new data obtained has enabled GlaxoSmithKline to clearly identify water usage for different areas of the plant, providing a far better understanding of the costs. GlaxoSmithKline is now in a position to identify changes and which processes they relate to.

The new wireless infrastructure makes it very easy and cost effective to add additional measurement devices without the need for new cabling. GlaxoSmithKline are already looking at installing a wireless level device that will be added to the existing network.

"We are more than satisfied with the solution, which is proving to be reliable with no signal loss. Based on a successful implementation, at some point in the future we are perhaps, looking towards a plant with no wires."

Emmett Martin,
Site Services & Automation Manager
GlaxoSmithKline

Emerson
12301 Research Blvd.
Research Park Plaza, Building III
Austin, TX 78759
T (512) 832-3500
F (512) 834-7600
www.Emerson.com

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