

GAS SABIC Improves Plant Server and Asset Protection with Emerson's Wireless Temperature Monitoring Solution

RESULTS

- Continuous temperature monitoring of server and asset rooms
- Improved asset protection
- Reduced operator manual rounds
- Lower capital cost
- Fast and easy installation



APPLICATION

Temperature monitoring in air conditioned server and asset rooms

CUSTOMER

GAS National Industrial Gases Company-Saudi Basic Industries Corporation (GAS SABIC). The company operates oxygen and nitrogen plants in Jubail and Yanbu in Saudi Arabia.

CHALLENGE

Server rooms and other data communication-equipped plant locations require constant cooling and continuous temperature monitoring because these servers and a wide range of electronic, electrical and mechanical devices inside them generate a significant amount of heat. These places are very critical not only because they support the plant's process and control systems but more importantly because their failure can have a massive impact in the entire plant production.

"We were very concerned with the risk of overheating equipment," said Khaled Al-Shehri, Electrical and Instrument Manager for Reliability and Inspection in GAS SABIC. "When the air conditioning system in the server rooms malfunction, room temperature will definitely rise, which can result in equipment failure, loss of plant data, and ultimately loss of production."

GAS SABIC's Reliability Team had been making rounds manually to monitor room temperatures, which was laborious and time-consuming. Their commitment to operational excellence led to the decision of working with Emerson to improve this process.

"We needed a solution to monitor the server rooms continuously and enable early detection of failures in the air conditioning systems," said Mr. Al-Shehri.

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Khaled Al-Shehri

Electrical and Instrument Manager, GAS SABIC



Emerson Smart Wireless Temperature Transmitters form a self-organizing wireless network across the Jubail plant.

SOLUTION

GAS SABIC chose the capabilities of Emerson Smart Wireless to address the challenge. A total of 32 Temperature Transmitters were installed in 32 various locations across the company's Jubail plant. These included server rooms, substations, analytical equipment rooms, uninterrupted power supply (UPS) rooms, control rooms, and other areas that are often unmanned. Of the transmitters, 25 units are Model 248 to cover standard range measurement while 7 units are Model 648 to suit locations that needed extended range.

The devices form a self-organizing wireless network to transmit temperature data to the plant's existing Smart Wireless Gateway, which in turn sends the data to the plant's distributed control system (DCS) network.

Mr. Al-Shehri said, "GAS SABIC decided to invest in the Wireless Technology of Emerson Process Management since we believe in innovative methods that are proven, reliable and cost effective."

"The advantage is that the devices require no external power to operate and they are simple to install and commission. We did not need to invest in any additional gateways, as our existing gateway—which was installed in 2011—had enough spare capacity for additional devices."

"With Emerson's wireless system in place, a failure in the air conditioning system can get detected early, and thus plant data servers can be protected from overheating. It helped us to minimize our dependence on manual rounds."

Right now, Emerson is working with GAS SABIC in deploying a similar wireless application in its oxygen and nitrogen plant in Yanbu.

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Khaled Al-Shehri

*Electrical and Instrument Manager
GAS SABIC*

RESOURCES

Emerson Process Management Chemical Industry

<http://www2.emersonprocess.com/EN-US/INDUSTRIES/CHEMICAL/Pages/index.aspx>

Rosemount Wireless Products

www.emersonprocess.com/wireless

Rosemount Wireless Transmitters & Sensors

<http://www2.emersonprocess.com/en-US/brands/rosemount/Wireless/Pages/index.aspx>

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