

Plant Avoids Shutdowns, Saves \$2.6 Million and 4320 Man-hours Using Emerson™ Smart Wireless

RESULTS

- Avoided four shutdowns over four years
- Saved \$2.6 million in production loss
- Avoided safety and environmental incidents
- Saved 4,320 man-hours in clean-up



APPLICATION

Measure critical reactor temperatures to avoid agglomeration causing shutdown in Linear Low Density Polyethylene (LLDPE) plant

CHALLENGE

An LLDPE plant in India polymerizes ethylene in a fluidized bed reactor. Unfortunately, profile temperatures around critical zones of two 34-meter high reactors could not be made with conventional wiring due to the dense infrastructure surrounding the reactors. Temperature is critical to the polymerization process, and the plant was challenged by agglomerate formation which occurred when fluidization temperatures fluctuated abnormally. When temperature is not properly controlled, lumps form on the inside of reactor walls and downstream equipment, resulting in increased downtime or plant shutdown, production loss, and risk of safety and environmental incidents.

SOLUTION

The plant used Emerson's Smart Wireless solution to profile temperatures around the critical zones of both 34-meter high fluidized bed reactors. The wireless predictive monitoring avoided plant shutdowns by providing early detection of abnormal temperature fluctuations and deviation alarms to assist in following standard operating procedures. Four shutdowns have been prevented in the first four years of operation, avoiding production loss and an estimated 4,320 man-hours to clear agglomerate and restart operations.

This was the first wireless installation and has helped gain immense confidence in the technology. It has served as a reference to other sites where refinery and tank farm applications are currently being considered and implemented.

RESOURCES

Emerson Process Management Chemical Industry

www2.emersonprocess.com/EN-US/INDUSTRIES/CHEMICAL/Pages/index.aspx

Emerson Smart Wireless Gateways

www2.emersonprocess.com/en-us/brands/rosemount/wireless/wireless-gateways/pages/index.aspx

Four shutdowns have been prevented in the first four years of operation.

Standard Terms and Conditions of Sale can be found at: www.Emerson.com/en-us/pages/Terms-of-Use.aspx
The Emerson logo is a trademark and service mark of Emerson Electric Co.
Rosemount and Rosemount logotype are trademarks of Rosemount Inc.
All other marks are the property of their respective owners.
© 2015 Emerson Process Management. All rights reserved.

Global Headquarters

Emerson Process Management

6021 Innovation Blvd.
Shakopee, MN 55379, USA

- +1 800 999 9307 or +1 952 906 8888
- +1 952 949 7001
- RFQ.RMD-RCC@EmersonProcess.com

Europe Regional Office

Emerson Process Management Europe GmbH

Neuhofstrasse 19a P.O. Box 1046
CH 6340 Baar, Switzerland

- +41 (0) 41 768 6111
- +41 (0) 41 768 6300
- RFQ.RMD-RCC@EmersonProcess.com

Middle East and Africa Regional Office

Emerson Process Management

Emerson FZE P.O. Box 17033,
Jebel Ali Free Zone - South 2
Dubai, United Arab Emirates

- +971 4 8118100
- +971 4 8865465
- RFQ.RMTMEA@Emerson.com

Asia Pacific Regional Office

Emerson Process Management Asia Pacific Pte Ltd

1 Pandan Crescent
Singapore 128461

- +65 6777 8211
- +65 6777 0947
- Enquiries@AP.EmersonProcess.com

00830-1200-4420, Rev AA

