Perstorp Solves Challenging Level Measurement Application Using Rosemount™ 5408

RESULTS

- Reliable measurement despite the challenging conditions
- Downtime reduced considerably
- Less maintenance needed
- Personnel safety increased

The Rosemount 5408 was able to handle turbulence, foam and agitators and provide a reliable, stable level measurement.

APPLICATION

Level measurement in reactors and mixer vessels with agitators and heavy turbulence and condensation

CUSTOMER

Perstorp Specialty Chemicals AB, Perstorp, Sweden

CHALLENGE

Perstorp operates a specialty chemical plant in Sweden. The plant is run at close to maximum capacity so any disturbance in the process can be very expensive. Every batch involves a four-hour process and one batch lost could have serious financial implications.

Perstorp required continuous level measurement in their reactors and mixer vessels. The vessels contain central shaft agitators at multiple levels (two levels minimum). The agitators run at speeds of 30-80 rpm so the surface can be very turbulent. In addition, the vessels can be very narrow inside, which adds to the level measurement challenge.

The amount of turbulence inside the vessels makes it very difficult to detect the surface. Also some of the vessels have a thick layer of dense foam.

The customer tested ultrasonics and both both pulsed and FMCW radars on the vessels but none of these performed well in the application.

SOLUTION

Following discussions with Emerson™, Perstorp installed a Rosemount 5408 Non-Contacting Radar Level Transmitter with a process seal antenna. With its high sensitivity and unique software features, the Rosemount 5408 is able to handle weak signals in a turbulent and foamy environment. It also provides advanced signal processing to handle extreme turbulence. The process seal antenna is a good solution for dealing with heavy condensation.

Perstorp were very impressed with the Rosemount 5408. They tested it on applications on which they believed were impossible to measure, all with good results. They have installed three units and now experience less downtime and maintenance and have a safer environment for their workers.

Illustration shows the Rosemount 5408 installed on a cyclone reactor.

EMERSON™

RESOURCES

Rosemount 5408 Non-Contacting Radar Level Transmitter
Emerson.com/Rosemount5408

Emerson Automation Solutions Industries
Emerson.com/Industries/Chemical

Linkedin.com/company/Emerson-Automation-Solutions
Twitter.com/Rosemount_News
Facebook.com/Rosemount
Youtube.com/user/RosemountMeasurement
Google.com/+RosemountMeasurement

Global Headquarters
Emerson Automation Solutions

6021 Innovation Blvd
Shakopee, MN 55379 USA
+1 800 999 9307 or +1 952 906 8888
+1 952 949 7001
RFQ.RMD-RCC@Emerson.com

Europe Regional Office
Emerson Automation Solutions 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@Emerson.com

Middle East & Africa Regional Office
Emerson Automation Solutions

Emerson FZE P.O. Box 17033
Jebel Ali Free Zone - South 2
Dubai, United Arab Emirates
+971 4 811 8100
+971 4 886 5465
RFQ.RMDMEA@Emerson.com

Asia Pacific Regional Office
Emerson Automation Solutions

1 Pandan Crescent
Singapore 128461
+65 6777 8211
+65 6777 0947
Enquiries@AP.Emerson.com

00830-0300-4408_RevAA

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