

Dusty Solids Measurement Application Solved Using Rosemount™ 5408

RESULTS

- Reliable measurement despite dusty conditions
- Downtime reduced
- Less maintenance needed



APPLICATION

Lime silo 27 meters high containing very fine lime powder

CUSTOMER

Södra Cell Värö, Väröbacka Sweden

CHALLENGE

The Södra Cell mill in Värö is one of the world's most modern pulp production facilities producing 700,000 tons of pulp and 1.6 TWh of energy annually. The company needed to measure the level of lime in 27 meter high silos but because the lime piles up inside the silo the surface to measure is not flat, and the lime creates towers of powder under the inlet. In addition, lime is a very fine powder that covers everything with a fine layer and is prone to build-up. These challenges made it difficult to measure the level with any degree of accuracy. Other challenging factors included the distance to be measured and the low dielectric constant of the media.

Sodra had used mechanical devices, ultrasonics and radars but these all suffered from clogging. With the majority of non-contacting devices the signal levels are very low, which made them unreliable.

SOLUTION

The customer installed a Rosemount 5408 Non-Contacting Radar Level Transmitter with a parabolic antenna. The Rosemount 5408 uses FMCW technology, which made it more sensitive than a pulsed radar transmitter. This increased sensitivity allowed it to measure on the lime powder, which has a low dielectric constant.

The parabolic antenna's built-in air purging adapter prevented product build-up, which is common in lime applications. The swivel design enabled inclination of the transmitter for optimum performance since the roof was not flat. To measure solids correctly, the Rosemount 5408 uses special software algorithms specifically designed to handle characteristics of solids products.

Once installed, the Rosemount 5408 proved to be very reliable and was able to track the echo without any problem. The radar echo plot showed a clear peak where the level was. Sodra used the user-friendly interface to commission the Rosemount 5408 with great success.

The Rosemount 5408 is able to handle the dusty environment and provide reliable measurement.



Rosemount 5408 installed in the lime silo.

RESOURCES

Rosemount 5408 Non-Contacting Radar Level Transmitter

Emerson.com/Rosemount5408

Emerson Automation Solutions Industries




Emerson.com/pulp-paper

Standard Terms and Conditions of Sale can be found on the [Terms and Conditions of Sale page](#).
The Emerson logo is a trademark and service mark of Emerson Electric Co.
Rosemount and the Rosemount logotype are trademarks of Emerson.
All other marks are the property of their respective owners.
© 2018 Emerson. All rights reserved.

 [Linkedin.com/company/Emerson-Automation-Solutions](https://www.linkedin.com/company/Emerson-Automation-Solutions)
 [Twitter.com/Rosemount_News](https://twitter.com/Rosemount_News)
 [Facebook.com/Rosemount](https://www.facebook.com/Rosemount)
 [Youtube.com/user/RosemountMeasurement](https://www.youtube.com/user/RosemountMeasurement)
 [Google.com/+RosemountMeasurement](https://plus.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

00830-0100-4408 Rev AA

ROSEMOUNT™


EMERSON™