

Fragrance Company Measures Level in Storage Tank Reliably with Guided Wave Radar

RESULTS

- Accurate and reliable level measurement
- Installation completed without modifications to the existing vessel
- Provided information needed to run a more efficient process



APPLICATION

Level measurement of propylene glycol in a cylindrical tank

Application Characteristics: Clean fluid, higher dielectric value (10+), turbulent

CUSTOMER

International Flavours and Fragrances India Ltd., Chennai, India

CHALLENGE

The maintenance manager at International Flavours and Fragrances India Ltd, Mr. S. Ramkumar, needed to measure the mass of liquid propylene glycol in a storage tank. There are many technologies available for measuring level in tanks. He weighed the advantages and disadvantages of the different types of measurement and decided that radar level would be the best choice for his application.

Although he decided radar was the best solution, there were still some difficulties that needed to be worked through. The gauge would be mounted on a small opening near the side of the tank. There was concern that a non-contacting radar with a small antenna would detect too many disturbances due to the wider beam width of a small antenna. Plus, turbulence during tank filling could create more signal loss.

His final requirement was a device that would be easy to configure and commission once it was installed and provide an output proportional to mass.

SOLUTION

Emerson Process Management engineers discussed the different types of radar level measurement technologies that the maintenance manager could use. After considering the criteria and the application, they decided that a Rosemount 3301 Guided Wave Radar (GWR) transmitter with a coaxial probe offered the best solution. A coaxial probe fits into the small connection and provides complete isolation from any potential disturbing obstacles.

“We chose the right product from the right vendor.”

Mr. Ramkumar
IFF Maintenance Manager



The Rosemount 3300 fit into the existing connection on the propylene glycol tank.

ROSEMOUNT[®]

For more information:
www.rosemount.com


EMERSON[™]
Process Management

The Rosemount 3300 Series is based on Time Domain Reflectometry (TDR) technology. Low power nano-second microwave pulses are guided down a probe immersed in the process media. Since the waves are guided along the probe, this technology is excellent for small, narrow tanks. The coaxial probe is the version best suited for applications where it will be close to walls or other objects and where there is high turbulence.

The 3301 uses Dynamic Gain Optimization™ which means it automatically adjusts gain to maximize the signal-to-noise ratio in each application. This increases measurement reliability and accuracy.

Emerson engineers provided advice and support, and helped configure the transmitter and indicator during installation. With the level measurement from the 3301 GWR, the known geometry of the tank and the density of the product, the indicator was configured to give an output proportional to mass.

Despite the difficulties of the application, the 3301 now provides the level measurement the maintenance manager was after. "The application was far from straight forward, but I selected the right product from the right vendor. The instrument is doing the job very well and we now have the information we needed to run a more efficient process," Mr. Ramkumar said.

RESOURCES

Emerson Process Management Food & Beverage Industry

<http://www.emersonprocess.com/foodandbeverage/>

Rosemount 3300 Series Guided Wave Radar Level and Interface Transmitters

<http://www.emersonprocess.com/rosemount/products/level/m3300.html>



Rosemount 3300 Guided Wave Radar Transmitter with coaxial probe.

The Emerson logo is a trade mark and service mark of Emerson Electric Co. Rosemount and the Rosemount logotype are registered trademarks of Rosemount Inc. All other marks are the property of their respective owners.

Emerson Process Management

Rosemount Division
8200 Market Boulevard
Chanhassen, MN 55317 USA
T (U.S.) 1-800-999-9307
T (International) (952) 906-8888
F (952) 949-7001
www.rosemount.com

Emerson Process Management

Heath Place
Bognor Regis
West Sussex PO22 9SH,
England
T 44 1243 863121
F 44 1243 867554

Emerson Process Management

Emerson Process Management Asia Pacific
Private Limited
1 Pandan Crescent
Singapore 128461
T (65) 6777 8211
F (65) 6777 0947
Enquiries@AP.EmersonProcess.com

ROSEMOUNT®

For more information:
www.rosemount.com



EMERSON™
Process Management