

## Confectionary Manufacturer Eliminates Unscheduled Shutdowns and Reduces Operations and Maintenance Costs with Rosemount 5300 Guided Wave Radar

### RESULTS

- Eliminated unscheduled shutdowns
- Reduced operations and maintenance costs
- Reduced risk to personnel safety



### APPLICATION

Tank inventory level monitoring

### APPLICATION CHARACTERISTICS

Fluids with condensing vapors

### CUSTOMER

A leading global confectionary manufacturer in North America

### CHALLENGE

The confectionary manufacturer needed to monitor corn syrup and vegetable oil inventory levels in heated storage tanks in order to maintain uninterrupted production and minimize shipping and storage costs. Non-Emerson ultrasonic level transmitters had been used for a number of years. As product was drawn out of the storage tanks, outside air would be drawn in. Moisture in the outside air would condense on the face of the ultrasonic sensor leading to inaccurate level measurement. The inaccurate measurement could lead to ingredient shortages and unscheduled shutdowns that were estimated to cost about \$100,000 per hour. In addition, an inaccurate measurement could lead to ordering ingredients when the inventory tanks were too full to accept the entire shipment. The tankers would need to remain on site until they could be completely offloaded. Additional charges from the trucking company cost an estimated \$30,000 per year.

*Confectionary manufacturer saves an estimated \$160,000 per year by using the Rosemount 5300 Guided Wave Radar transmitter for tank level measurement.*



Figure 1. Rosemount 5300 Guided Wave Radar

**ROSEMOUNT**<sup>®</sup>

For more information:  
[www.rosemount.com](http://www.rosemount.com)

  
**EMERSON**<sup>™</sup>  
Process Management

In an effort to maintain uninterrupted production while avoiding additional shipping charges, production and ingredient usage levels were compared. If tank level appeared inconsistent with production, maintenance technicians would be dispatched to the tank farm to check the tanks and remove moisture from the ultrasonic level transmitter sensor. Since this maintenance needed to be performed from the top of the tanks, maintenance personnel were exposed to safety risks. To minimize the risks maintenance workers worked in pairs and were strapped into safety harnesses before performing maintenance on the ultrasonic level transmitters. This maintenance typically needed to be performed weekly at an estimated cost of almost \$30,000 per year.

### SOLUTION

This manufacturer installed a Rosemount 5300 Guided Wave Radar Level Transmitter. The 5300 is immune to condensation. The 5300 has been installed for well over a year with no need for maintenance. In addition, no erratic or anomalous readings have been experienced.

The customer experienced many positive business benefits from the 5300 Guided Wave Radar Level Transmitter. No maintenance has been required for over a year, saving in excess of \$30,000 and eliminating the safety risk to maintenance personnel. In addition, no unscheduled shutdowns due to ingredient shortages have been experienced, saving an estimated \$100,000 for every hour of lost production avoided. Finally, replacement inventory is not ordered when the storage tanks are too full to accept the complete load. This has reduced the number of loads needed, reduced orders for loads over weekends, and eliminated additional charges from the trucking company. This has saved an additional estimated \$30,000 per year.

### RESOURCES

#### Emerson Process Management Food & Beverage Industry

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

#### Rosemount 5300 Series Guided Wave Radar

<http://www2.emersonprocess.com/en-US/brands/rosemount/Level/Guided-Wave-Radar/5300-Series/Pages/index.aspx>

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](http://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](mailto:Enquiries@AP.EmersonProcess.com)

**ROSEMOUNT**<sup>®</sup>

For more information:  
[www.rosemount.com](http://www.rosemount.com)

  
**EMERSON**<sup>™</sup>  
Process Management