

Accurate Level Measurement in Edible Oil Tanks Allows Tighter Process Control

RESULTS

- Reliable and accurate measurement on a low dielectric fluid
- Reduced maintenance
- Higher quality end product



APPLICATION

Tank level for olive oil and other edible oils

Application Characteristics: Hot, low dielectric, food grade oil in a tall storage vessel with turbulence

CUSTOMER

Producer of food grade oils in Europe

CHALLENGE

The tanks in this application are used for storage of olive oil and other edible oils. They are 39 to 52 ft (12 to 16 m) high and have an operating temperature of 212 °F (100 °C).

Agitation, long distances, low dielectric and vapors combine to make a difficult application condition for radar transmitters. Additional requirements include that any level device must meet hygiene standards and be easy to clean. No other level transmitters have measured correctly in these tanks.

Accuracy and reliability are very important for the quality of the finished products. This customer previously used mass flowmeters for measuring purposes, but they did not produce accurate results in this application. In the event of an inaccurate reading from the flowmeter, the error would propagate all the way down the production line, and not be discovered until manufacture was complete.

SOLUTION

The 4-wire Rosemount 5601 Radar Level Transmitter has increased power to reliably cope with the adverse conditions. Because the process seal antenna provides an easy-to-clean surface, it meets the hygienic requirement. The increased reliability and accurate measurement provides tighter process control, resulting in higher quality in the end product.



The Rosemount 5600 transmitter is mounted on an existing nozzle on the tank roof.

Previous instrumentation gave inaccurate readings which resulted in incorrect volumes and a low quality final blend. The better accuracy provided by the radar gauge results in more consistent blends by way of better volume measurement and control.

RESOURCES

Rosemount 5600

<http://www.emersonprocess.com/rosemount/products/level/m5600.html>

Emerson Process Management's Food and Beverage Industry Web Page

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



The Rosemount 5600 with Process Seal Antenna.

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