

# BP Achieves Worry-Free Interface Measurement with Rosemount Radar Technology

## RESULTS

- Increased product quality through accurate, reliable interface measurement
- Reduced maintenance due to elimination of drifting problems
- Simple and fast setup
- Improved process efficiency



## APPLICATION

Absorber-Stripper Separator Interface Level Control - Diesel Oil and Water Interface

**Application Characteristics:** Clean oil and water fluids; oil SG varies from 0.7 to 0.8; oil has dielectric of about 2, water has a high dielectric.

## CUSTOMER

BP Refinery, Toledo, OH

## BACKGROUND

This vessel is used to separate water from the oil. The oil is then fed back to the absorber for further processing and the water is routed to the treatment facility (see Figure 1). A properly functioning interface level transmitter helps to improve the efficiency of this process and decreases the potential for product hazing. Hazing occurs when the oil is contaminated with water.

- Measurement Range: 4 feet (1.2 meters)
- Pressure: 250 psig (17 bar)
- Temperature: 80-120 °F (27 - 49 °C)

## CHALLENGE

This BP Refinery needed a more reliable interface measurement. They used a competitive probe for several years. While it provided a good interface measurement, it tended to drift and needed constant readjustments. Based on past experience with other technologies, BP wanted to stay with a device that had no moving parts.

Complicating the matter were changes in oil density. A change in specific gravity of 0.7 to 0.8 was very common. This ruled out mass-based measurement technologies.

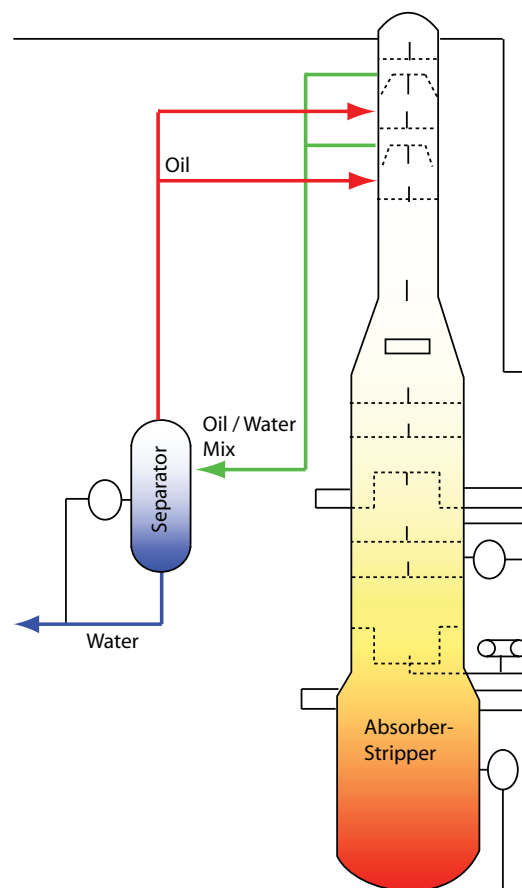


Figure 1: A diagram of the Absorber-Stripper with the separator and oil/water feedlines highlighted.

### SOLUTION

A Rosemount 3302 Interface Level Transmitter with a coaxial probe was installed in the separator in the spring of 2003. Like the previous probe, it has no moving parts and is unaffected by changing densities. The easy-to-use, yet comprehensive, software made the setup procedure very simple and fast, even for an interface measurement.

BP has been using the 3302 successfully since its installation and has not experienced any problems with drift.

### RESOURCES

#### Rosemount 3300

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



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