

Inclined Installation with Guided Wave Radar Enables Hexane Level Measurement

RESULTS

- Enables a level reading from the side of the vessel.
- Provided tighter process control resulting in higher quality end product
- Accurate and reliable level readings independent of density changes



APPLICATION

Liquid Hexane Level for Palm Oil Production

Application Characteristics: Clean, low dielectric fluid (1.9), some density variation, non-standard tank shape.

CUSTOMER

Eco Oils Sdn Bhd, in Malaysia

CHALLENGE

In an expansion project at Eco Oils Sdn Bhd in Malaysia, palm oil is extracted in a unique filtration process developed and engineered for the first time in the world.

The level in this evaporator is always maintained in the bottom portion at less than 4 meters (13.2 ft).

On these hexane evaporators there is neither a top-mounting nozzle for a top-down instrument nor a bottom nozzle for a differential pressure transmitter.

The customer also was concerned about the varying density of hexane. Maintaining the correct level in this evaporator is critical to maintain the flow of hexane to the next process.

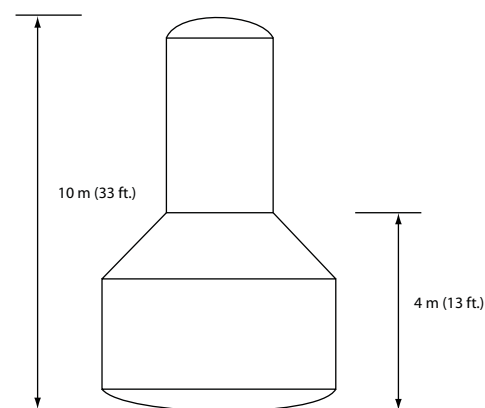
SOLUTION

It was determined that there was a possibility to mount a gauge at an inclined position of 35° in the lower portion of the vessel where the hexane level was to be maintained.



The Rosemount 3300 Guided Wave radar (GWR) transmitter seemed like a great option for accurate level measurement. The transmitter is suitable for a variety of different tank shapes and sizes. The use of a rigid probe mounted in the side of the tank at an angle allowed this normally top-down technology to be used in this installation. The installation angle was configured into the gauge using Radar Configuration Tools.

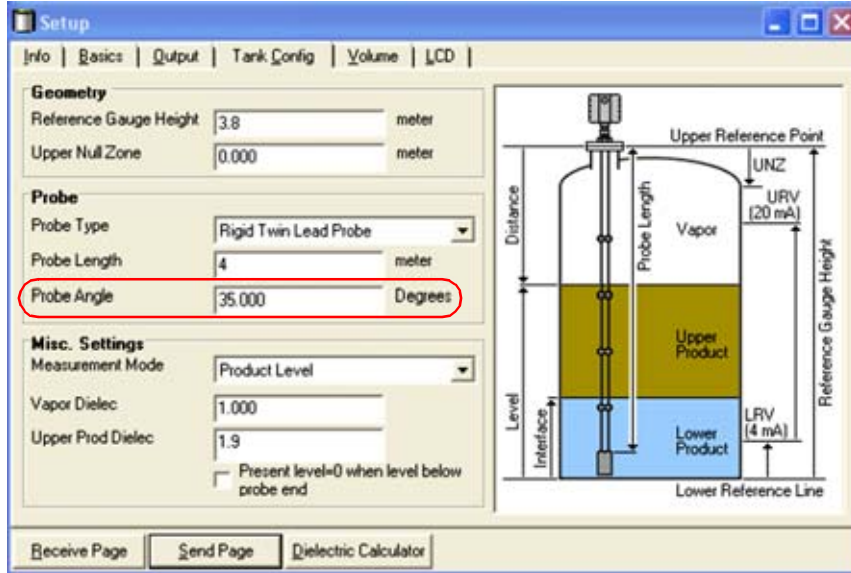
The increased reliability and accurate measurement provides tighter process control, resulting in higher quality in the end product.



Hexane evaporator with no top-mounting nozzles and no space in the bottom.

This allowed the 3300 to make a correction to obtain the accurate vertical level height. Because radar is immune to density changes, no additional corrections were needed. The increased reliability and accurate measurement provides tighter process control, resulting in higher quality in the end product.

The customer now has a reliable hexane measurement.



Inclined installation at 35° of Rosemount 3300 gives the customer a reliable level reading from a non-standard tank shape.

With Radar Configuration Tools, compensation for a mounting angle is easy.

RESOURCES

Rosemount 3300

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

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