

Cleaner Water Returned To Ocean With Guided Wave Radar

RESULTS

- Higher measurement accuracy and repeatability despite sea swell conditions
- Increases safety
- Reduces potential for spillage and environmental damage
- Eliminates maintenance

APPLICATION

Natural Gas condensate level on sea water

Application Characteristics: Clean, low dielectric (1.6 to 1.7) fluid on top of high dielectric (80) fluid

CUSTOMER

An offshore oil platform in the South China Sea

CHALLENGE

An offshore oil platform in the South China Sea produces 15,000 barrels of crude oil per day. In order to meet environmental pollution requirements they had to re-think the emissions monitoring and control scheme, which led to a high priority "Vent to Flare" project.

Natural Gas and water is separated from the crude oil. The natural gas is vented out and combusted through a Flare stack. However, not all of the vented gas is combusted and its condensate gradually builds up and accumulates on top of the seawater in an accumulator vessel below the flare stack. The goal is to detect the condensate level and remove it for treating rather than dumping it back into the ocean.

The customer used a mechanical float to measure the total overall level, which was hampered by the movement of the seawater due to the waves. The readings were unreliable and frequent maintenance was required.



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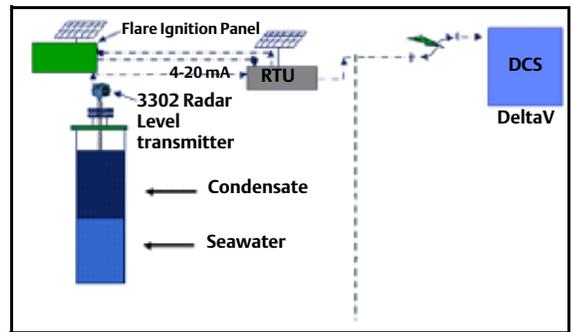
SOLUTION

The Rosemount 3302 Guided Wave Radar measures both level and interface with a single tank penetration and gives a very steady output despite changing conditions such as fluid movement or property changes.

This means that irrespective of "sea swell," the customer accurately knows the actual amount of condensate on top of the sea water. Based on the 3302 level and interface readings, the condensate is pumped out of the accumulator and processed as fuel. The seawater is discharged to the ocean without the hydrocarbon contaminates.



Rosemount 3302 is used to measure level and interface



A block diagram of the system integration showing the 3302 connected with solar panels and RTU transmission to control system

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