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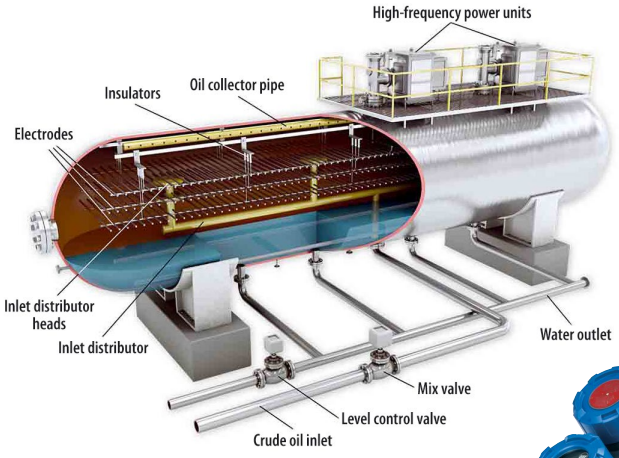
New Eclipse® Model 706 GWR Adapter For Enhanced Performance & Troubleshooting in Desalter Interface Measurement

Two Magnetrol Eclipse Guided Wave Radar (GWR) Model 705s were being used to measure the interface in a desalter at a refinery, the control of which is a critical process. Inorganic chlorides, suspended solids, and trace metals found in untreated crude must be removed by chemical or electrostatic desalting. This reduces the risk of acid corrosion, plugging, fouling and catalyst poisoning in downstream units. Measurement of the oil-water interface in the desalter is crucial in separating the cleansed crude from contaminants.



The operator had inherited the GWRs from the previous refinery owners and had doubts as to the accuracy of the interface measurement. One of the GWRs was installed in a flooded chamber whilst the other was directly inserted into the vessel. The integral electronics and cumbersome DTM made the original 705s difficult to troubleshoot, which prompted the customer to consider using the new Model 706 Adapter. This adapter allows existing Model 705 probes to be retrofitted with the Model 706 transmitter without breaking the process seal, therefore acquiring the best-in-class GWR performance of the new Model 706, including the highest Signal-to-Noise (SNR) ratio on the market. This is particularly advantageous when dealing with the low dielectric liquids typically found in refineries.

Aside from the increased performance, technicians could now use the latest Model 706 DTM for troubleshooting. The enhanced DTM features referenced by the technicians as most useful were:

New Model 706 Adapter

1. The capability, on one screen, to view not only the echo curve itself but also the operational conditions of the transmitter along with the configurable parameters. The ability to change parameters and refresh the curve to see immediate results without going into multiple screens.

2. Data logging capabilities where you can capture all of the data associated with the last nine events, which include configuration parameters, echo curve, echo curve history and event history.

Due to the meticulous application of the technicians and the deployment of the new Model 706 Adapter, the refinery is now able to effectively measure the interface level as well as track a potential build-up/coated area on the probe, which previously led to interface measurement errors. The Model 706 has the capability to monitor build-up as a percent of level threshold, or as a rate. Therefore, the user can track these parameters through a HART variable to trigger a flushing process or for timely maintenance/cleaning intervals. This prevents improper operation of the desalter and potential unplanned downtime.

For more information on interface measurement applications, contact us directly or visit able.co.uk

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