

Automatic cleaning - A redundant Oil in Water Analyzer design for reliable data in dirty environment



MIRMORAX

Scope:

The scope was to test an inline probe with as little requirement for maintenance as possible in a dirty environment. Mirmorax knew already that our analyzer could handle a 3 mm layer of scale and still provide accurate measurements, however in a dirty environment cleaning would still be required to avoid manual cleaning.

Approach:

Mirmorax uses ultrasonic signals to sample data that we again produce measurement values from. The advantage with ultrasonic signals is that ultrasound propagate through materials such as flesh and blood when used in medical examinations or when music easily propagates through the walls from your teenagers stereo. And because of this, Mirmorax measurement technology is by physics less vulnerable to contamination than other technologies used to measure oil in water. Take for example light or use of light in photo to measure, where a thin sheet for a solid substance can block all light. Still, to ensure no need for mainance, Mirmorax installed an automatic cleaning system consisting of a flushing unit cleaning the probe as often as required using 3 small pulses of high pressured water.

Challenges: Cleaning requirements will vary from application to application. It was therefore necessary to provide a programable solution to fit every requirement.

Result:

Mirmorax Oil in Water Analyzer providing reliable measurements without manual cleaning. Initial plan was to remove the probe for inspection after 3 months although measurements results revealed that the cleaning system kept the transducer clean with no requirements for inspection nor manual cleaning.



Benefits:

Mirmorax technology is less vulnerable to contamination, and with the cleaning system it can be installed for months with no maintenance requirement.

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Key Facts:

Product:

- ◆ Mirmorax OIW LR2500
- ◆ Electronics in Ex Enclosure

Other Equipment:

- ◆ Mirmorax Cleaning System

Date of test: January to August 2016

Details:

- ◆ Installation offshore at NCS
- ◆ Installed for 8 months without manual cleaning
- ◆ Still providing reliable measurements at the end of the 8 month test