

# Chemical company ensures clean water discharge using Mobrey blanket monitor

## RESULTS

- Reduced set up time
- Continuously monitored sludge blanket characterising the iron oxide based sludge level
- Direct connection to customer's DCS

## APPLICATION

Iron oxide sludge level

## CUSTOMER

Ineos, formerly known as Phenol Chemie, Antwerp, Belgium

## CHALLENGE

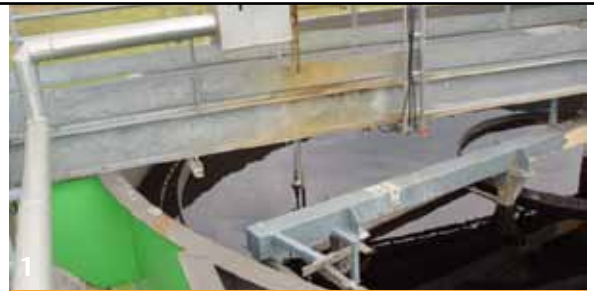
Effluent produced from the manufacture of chemicals is carefully treated and filtered before it is discharged into the water course nearby. The treatment process involves a two phase filter and settlement system, the second stage of which involves the production of a sludge blanket that needs to be monitored. The customer required an instrument that could validate the sludge level in the chemical secondary settlement tank but the fixed tank bridge requires the unit to accommodate a tank borne rotating scraper.

## CHALLENGE

The MSL600 was suggested and was consequently installed by Ineos on one of their secondary settlement tanks. The tank had a diameter of approximately 98.5 inches, with a tank depth of 102.3 inches.

In this process, the waste water sludge in these tanks is of relatively high density, with a well defined supernatant/blanket interface. With these conditions, the MSL600 immediately found the sludge blanket interface, with the correct range to target being produced by merely inputting the correct tank depth. The complete set-up process, including the 4-20mA output configuration took less than 20 minutes.

A key selling point for this installation is that this waste water tank uses a fixed bridge and a rotating scraper. For these applications, the MSL600 – unlike some of its competitors – has the ability to tilt and raise the transducer out of the supernatant when the scraper passes under the bridge (see fig. 1).



**“We are pleased with the unit and are now looking to use MSL600s on other sludge blanket applications”**  
Site operator



Figure 1 The Ineos waste water settlement tank showing the rotating scraper

Figure 2 MSL600 installed on the bridge

## CHEMICAL

### SOLUTION (continued)

Incorporated as standard within the MSL600 is the ability to detect that the scraper is passing underneath the bridge and tilting the transducer. When this happens, the 4-20mA outputs are fixed with their last good values and held there until the transducer is back to its normal position vertically in the supernatant (fig. 3 shows the transducer when tilted).

For this application at Ineos, the scraper passes by the MSL600 every 13 minutes, so the function of holding the last good value on the 4-20mA outputs is vital for their measurement.



Fig 3 MSL602 transducer tilted out of the supernatant

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