

CASE STUDY

Industry: Wastewater



Challenge: Sludge Blanket Detection

Ultrasonic sensors safeguard environmental protection

Delta Mobrey helped a leading UK water company to provide a system to detect sludge blanket levels and avoid potential environmental impacts. The plant now benefits from improved critical level detection, resulting in reduced response time and manual inspection costs, as well as giving the customer environmental peace of mind.

CUSTOMER BENEFITS

- Peace of mind solution for settlement tank sludge level alarm
- Improved response time, reduced need for manual intervention
- Greatly reduced risk of environmental damage penalties



UK water treatment plants must ensure they comply with regulations imposed by the Environmental Agency.

CHALLENGE

Delta Mobrey was asked to assist on final settlement tank (FST) level monitoring controls at a major wastewater treatment plant. The crucial factor was to ensure sludge would not overflow from the tank to the weir, causing environmental damage. The existing quality monitors were positioned on shared discharge lines and were unable to identify which tank was responsible for any accidental sludge discharge. Continuous effluent control was managed through manual intervention and monitoring; therefore, an improved sludge blanket control process was required.

SOLUTION

Following our review of the site, each FST was fitted with a gap sensor and control unit. These were mounted on the rotating bridge, with the sensor positioned a meter below the supernatant. The ultrasonic signal from the sensor easily passes through the clear water but is highly attenuated by sludge. Ultrasonic gap sensors have proven to be accurate trouble-free controls for practical applications where alternative technologies require regular attention. This system therefore provides an ideal solution to detect increasing sludge levels, trigger alarms, and ensure preventative action to safeguard the environment.

CASE STUDY

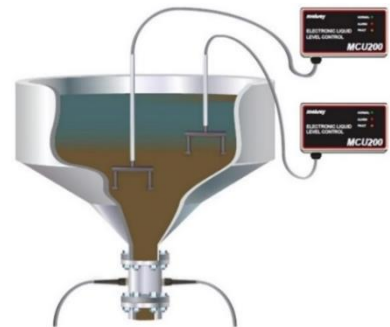
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Delta Mobrey Ultrasonic Point Level Sensor 433SD

- Wastewater sludge can be measured up to 29% undissolved solids
- Industrial slurries can be measured up to 60% undissolved solids



Application of 433SD Sensors inserted in a settlement tank with MCU200 Controllers.



Delta Mobrey Industrial Control Unit 200 Series

- Simple and cost-effective control electronics
- Three LED indicators for Normal, Alarm, and Fault
- Continuous cable check



About Delta Mobrey

For more than 100 years, Delta Mobrey Limited has been a world-leading specialist in the design and manufacture of quality process instrumentation for the measurement and control of fluids and gases in all industrial plant and equipment.

Trusted quality – proven value: quality and reliability have always formed the cornerstone of our success, recognised by industry with international approvals covering every aspect of our manufacturing and product portfolio, together with certifications spanning all areas of hazardous and regulated environments.

Global team – local support: as a global organisation, Delta Mobrey is totally committed to delivering the best possible customer service and technical support, ensuring a lifetime value of ownership, together with a flexible and responsive approach to meet our customers' individual demands.

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