

MULTITRODE PROBE

CaseStudy

Since their arrival into the UK water industry in 2005, MultiTrode has transformed the level sensing landscape by introducing innovative, environmentally friendly and cost saving solutions across the UK water industry. MultiTrode and their distribution partner Sentrige continue to provide long term solutions to traditional problems encountered by water authorities.

Opportunity

A UK water utility approached MultiTrode to combat the issues they were encountering with their effluent wells at two of their most prolific treatment works:

The failure of their ultrasonic device to measure the true liquid level due to foaming. The ultrasonic device often read a high level when it inevitably lost its true echo resulting in firstly, a high level of maintenance call outs, often out of hours and expensive. Secondly, the inaccurate reading often led to the pumps pumping the well dry, causing a pump failure and requiring further maintenance. Thirdly, the anti-foaming chemical used to dose the well was costing £1,000 every four months, just so the ultrasonic could measure.

Level sensing device failure due to the extreme build-up of harsh substances and the volatile and constrictive conditions of the wells.

The wells were not only extremely turbulent due to the cluttered arrangement which limited installation location, but also suffered from an extreme build up of insoluble substances, in this case Struvite (crystalline scale). Struvite is a substance which sticks to every surface that it comes into contact with, in this instance even the inside of pump bowls whilst running.

“Foaming is a common problem experienced in turbulent wet wells. Whilst anti-foaming chemicals are expensive, time consuming to administer and environmentally unfriendly, they are often seen as the only answer. This particular station required a device that continues to function in the harshest of environments, can withstand the pressures put upon it by turbulent and tight sized wells and eliminate the issues caused by foaming.”

Stuart Duncan, MultiTrode

“Not only was it costing the water utility in continuously despatching maintenance staff (sometimes out of hours) to unclog the wells, but the sensors were constantly tripping and stopping the pump, which ultimately affects the efficiency and performance of the station. The anti foam chemicals they were using were especially expensive but necessary when using ultrasonic level devices.”

Philip Tomkinson, Sentrige



Action

To combat the inevitable foaming and given the rather restrictive dimensions of the well in question, MultiTrode installed a 5 metre, 10 sensor MultiTrode Probe, the most reliable and cost-effective liquid sensor in the water industry. The Probe is specifically designed for the arduous and turbulent conditions encountered in sewerage, works in any conductive liquid and is backed by a 10-year warranty. The Probe was mounted using a uniquely designed bracket that when extracting The Probe from the well, cleans the built up substance that forms around the device. During operation The Probe eradicated the problems caused by foaming and harsh substance build up through its conductive design, allowing The Probe to continue working in the most hostile of environments.

“The MultiTrode Probe had come highly recommended within the UK water industry but the water utility had yet to experience the benefits, having always persevered with ultrasonic level devices. Installation was simple and they were impressed by the bracket fixing, which not only allows for easy inspection but cleans The Probe.”

Philip Tomkinson, Sentrige

Results

The MultiTrode Probe was simple to install, resilient and tough enough to work in the harsh environment it faced. The overall performance of the station improved dramatically as the robustness of The Probe ensures the pumps didn't fail due to a misreading of the level. It was also cost effective from a maintenance stand point as call outs went from twice a week to none. Simple to install, safe to operate, eliminates foaming issues, cuts maintenance time and makes pump station management easier.

“It's always great to hear about another successful installation of the MultiTrode Probe. Of course each station encounters unique issues that are particular to its location, but the MultiTrode Probe is versatile enough to solve the majority of problems. Our free trial allows clients to experience the benefits for themselves prior to purchase.”

Stuart Duncan, MultiTrode

The MultiTrode Probe benefits • ELIMINATE ANTI-FOAMING CHEMICAL COSTS • DECREASE MAINTENANCE CALL OUTS • ADAPTABLE INSTALLATION

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