

Accurate and reliable measurement at showcase treatment plant

RESULTS

- Submerged sensors are not fouled by debris
- Increased intervals between maintenance
- Reduction in lifetime costs

APPLICATION

Input data for treatment plant's advanced control systems

CUSTOMER

Anglian Water UK, with contractors Purac

CHALLENGE

The customer required reliable, proven instrumentation to provide input data to their control systems. The instrumentation needed to be intrinsically safe and provide accurate and reliable measurements.

SOLUTION

Almost one hundred Mobrey level transmitters and pressure sensors were installed. Selected for their specification and proven reliability by contractor Purac, the instruments provide vital input data for the plant's advanced control systems.

Purac chose Mobrey MSP Series ultrasonic liquid level transmitters, 9000 Series hydrostatic level sensors and MSL600 sludge blanket level monitors for use at Lowestoft. "The Lowestoft plant is equipped with state of the art monitoring and control systems," notes Phil Windle, Electrical Instrumentation Engineer with Purac. "The Mobrey level and pressure transmitters proved simple to install and provide an accurate and reliable input to the plant's control systems. They do the job perfectly."

MSP100s are used to monitor levels on either side of the inlet screens to control de-clogging and to measure the flow over a V-shaped flume at the input to each separator and on a number of process chemical storage tanks. These two wire, loop powered 4-20mA devices feature integral intelligent processing and built-in diagnostics, with Zone 0 approval for hazardous areas.

More than fifty submersible 9700s are installed on effluent tanks and sludge digesters at Lowestoft. The ceramic capacitive sensor in the 9700 offers major benefits over traditional metal diaphragm sensors, especially in waste water treatment applications, where its reduced susceptibility to the effects of sludge yields significant benefits.



"The Mobrey level and pressure transmitters proved simple to install and provide an accurate and reliable input to the plant's control systems."

Phil Windle, Electrical Instrumentation Engineer, Purac



Figure 1 Lowestoft treatment plant

Figure 2 MSL600 installed on fixed bridge

WATER & WASTEWATER

SOLUTION (continued)

MSL600 sludge blanket level monitors are installed on each of the three settlement tanks; the control unit is mounted on a fixed bridge with a remote sensor immersed in the liquid. A common problem with such submersed sensors is that they can become coated or fouled by sludge. The MSL600 has an integral air-purge system for self-cleaning at user-defined intervals, enabling the transmitter to function for longer periods between maintenance and reducing lifetime costs.

“They do the job perfectly”

Phil Windle, Electrical Instrumentation Engineer,
Purac



Figure 4 MSL600 installed on the settlement tank

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