

Sludge measurement system survives extreme weather conditions

RESULTS

- Savings made on expensive cabling
- Monitoring of the process is achieved remotely
- Elimination of potential problems from extreme temperature



APPLICATION

Sludge control on the primary settlement tank

CUSTOMER

Toronto City, Highland Creek sewage treatment works

CHALLENGE

The customer required a reliable sludge level monitoring system for their final settlement tank. The system had to be capable of withstanding extreme environmental temperatures.

SOLUTION

A Mobrey MSL600 sludge level monitoring system was installed at the plant and performed without problem even at temperatures as low as -18°F.

The ultrasonic transducer unit, suspended in the supernatant, transmits an ultrasonic pulse, which is reflected off the sludge blanket. The time of flight of the echo determines the height of the blanket to an accuracy of 1".

As the bridge traverses the tank, the blanket level measurement and a graphical display of the sludge blanket are displayed continuously on the control unit, located in the plant's control room. A radio telemetry link between the bridge mounted control unit and the control room based receiver allows the process to be monitored and controlled at a distance without having to install expensive cable.

Fouling of the sensor face in the hostile environment of the sludge tank is prevented by an innovative air-purge system which cleans the face of debris at regular, user-programmable intervals. This is much more effective than mechanical cleaning devices which can themselves easily become fouled; the MSL600 air purge system maintains the reliability and accuracy of the measurement.

“The self cleaning mechanism has not been hampered by the low temperatures at all”

Herb Kershaw BEP



Figure 1 Highland Creek treatment works
Figure 2 MSL600 installed over the primary settlement tank

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