



Echo Confidence for Severn Trent at Derby STW

Derby Sewage Treatment Works is the major works for the city, with a capability of 500,000 population equivalent. Raw sewage comes into a transfer pumping station, from where it is distributed to the process.

The large pumps in the 10 m (32.8 ft) deep sump have a combined capacity of around 6,000 L (1,585 gal) per second. The control system incorporates several float switches that have been prone to severe "ragging up." Even in normal circumstances,

the task of cleaning the float switches is difficult and unpleasant, with a proposal made to introduce davits to allow the floats to be winched out of the way for maintenance.

Severn Trent Water's commitment to protect the environment and serve the community dictates that the pumping station and the components used must be robust and reliable.

Having originally tried a different manufacturer's ultrasonic system, the result was disappointing and left Severn Trent with no confidence in the unit's ability to cope with the conditions.

After a trial of the alternatives, Severn Trent installed a Pulsar non-contacting, ultrasonic level measurement system, teaming the company's "Advanced 120" control unit with their dB15 transducer. The only available option for the



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transducer requires a reliable signal to be obtained from a position between two of the pump heads. The tight beam angle and high power dB15 made sure that strong echoes were achieved from the area, while Pulsar's DATTEM echo processing handled the analysis of the echo profile, zeroing in on the true level while ignoring competing signals from pump heads, girders and the like. An extra complication on this site is that the surface of the sewage can be very foamy.

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Featured Products



Pulsar's Ultra Range



Pulsar's dB15 Transducer

Delivering the Measure of Possibility

Pulsar Measurement offers worldwide professional support for all of our products, and our network of reps and distributors all offer full support and training. Our facilities in Malvern, UK and Largo, USA are home to technical support teams who are always available to answer your call or attend your site when required. Our global presence, with direct offices in the UK, USA, Canada, and Malaysia allow us to create close relationships with our customers and provide service, support, training, and information throughout the lifetime of your product.

By taking a step forward in echo processing technology, Pulsar Measurement addresses applications previously thought to be beyond the scope of ultrasonic measurement. This technology improves signal processing at the transducer head which has made it possible to increase resistance to electrical noise, enabling the transducer to 'zone in' on the true echo.

For more information, please visit our website:

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