CASE STUDY: GLENELG TREATMENT PLANT

A more measured world of water

A measured response
Glenelg Wastewater Treatment Plant, Australia

The Glenelg wastewater treatment plant in southwest Adelaide provides a reliable and secure wastewater service to 200,000 people in the local area. Delivering 3.8 billion liters of reused water for recreation and commercial purposes every year, the plant needs the most reliable, accurate and robust analytical instruments to ensure wastewater is safe to be discharged back into the environment.

A balancing act
All Water, who run the plant, needed to measure the dissolved oxygen levels in the wastewater. Controlling oxygen levels requires an exact balance. Too little dissolved oxygen means organic waste is not broken down. While too much dissolved oxygen indicates wasted energy and incurred costs that could have been avoided. All Water had been using a competitor's product to analyze dissolved oxygen levels but were unhappy with its durability and performance and sought an alternative.

The best of both worlds
The treatment process used plastic "saddles" to generate more agitation than mixing alone. However, this method caused the saddles to continually hit the surface of the probe. The resulting wear and tear meant that after three months All Water had to replace the probe's nose cap. So, as well as being sensitive enough to accurately measure the delicately balanced dissolved oxygen levels, the new solution to be hardy enough to operate in this demanding environment.

Trial by water
Based on ABB's track record of supplying reliable analytical measurement products for the water and wastewater industry, All Water trialled the AWT440 transmitter and ADS430 dissolved oxygen sensor. The transmitter can be used with minimum expertise or maintenance while the sensor delivers highly stable and accurate measurement and features dynamic luminescence quenching technology to eliminate sensor drift. The sensing element's robust build enabled it to operate effectively in these conditions. During the 3-4 month trial period, All Water had to replace the nose cap in the competitor's product, but not in the ADS430. Following the trial, ABB received a significant order for additional systems.

The ADS430 delivered better durability and more accurate reading than the competitor's product.

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