



Microcems, Asia provides level measurement solutions for a chemical mixing tank

The steel industry is a crucial part of our global economy and supports infrastructure, manufacturing, and other industries. Part of the steel production process involves treating wastewater from the galvanizing process before it is discharged from the steel production plant into the main municipal system for further treatment and then back into the local environment.

During the galvanizing of steel, different chemicals are used for cleaning the steel, creating the dips used throughout the galvanization process, and the treatment of the surplus water needed throughout the manufacturing process.

Level measurement - The challenges in chemical mixing

A steel galvanization plant in Thailand, Asia, required level measurement for one of their chemical mixing tanks in their wastewater treatment system. Chemicals provide many uses

within the wastewater process, including the breakdown of bacteria and other harmful substances that are present in the water before it's discharged back into the local environment.

On the face of it, tank level measurement is a simple application that doesn't usually run into many issues. However, chemical mixing tanks can present harsh conditions for instrumentation, including foam, vapor, fumes, and turbulence from motor blenders.

Old fashioned techniques

Engineers at the steel galvanizing plant were using old fashioned and manual techniques to check the levels of their chemical mixing plants. This was very time-consuming and presented a health and safety risk to staff. Traditionally, plant managers would check the acid or caustic soda level by looking at the open tank from the top, which is extremely dangerous for the operator while filling the tank with chemicals.

To help find a modern solution, they approached Microcems, one of Pulsar Measurement's trusted partners in Thailand. After looking at the application, engineers from Microcems decided that a PTFE-faced dB6 ultrasonic



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transducer would be best suited. All transducers from Pulsar Measurement have various options, and the PTFE-face option helps prevent corrosion or damage to the transducer from chemicals and other harsh substances. To accompany the transducer, an Ultra Lite controller was installed for localized level measurement and pump control.

Upon initial installation, engineers from Microcems encountered a few issues. They found that this was because of the motor blender located within the tank that caused the chemicals to be mixed turbulently. In the first test run of the transducer, the level readings fluctuated a lot while the blender was running. Microcems went above and beyond for the end-user by installing a 4" PVC standpipe into the tank, which reduced the ripples that happened while the chemical mixing system was running, ending in a happy result for both the end-user and Microcems.

To find out more about our dB transducer options for chemicals and other harsh substances, visit the Pulsar Measurement website.

More Information

dB Transducer: www.pulsarmeasurement.com/db-transducer

Partner Locator: www.pulsarmeasurement.com/partnerlocator

Delivering the Measure of Possibility

Pulsar Measurement offers worldwide professional support for all of our products, and our network of global partners 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, allows 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:

www.pulsarmeasurement.com



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