



Microcems provide accurate and reliable level measurement for oil tank.

Overview

Steel is a staple of the global economy and is used across many different industries worldwide. One part of steel production is the galvanization process. This is the process of dipping the steel into zinc to extend the life cycle of the steel and prevent any corrosion.

The galvanization process includes many different parts, from using alkaline and cleaning chemicals to wastewater treatment. As part of the degreasing process that happens at the very beginning of galvanization, there is often a need for oils and other substances to remove contaminants on the steel surface such as paint and grease.

All parts of the galvanization process must be monitored to ensure the right amount of chemicals are being used and to enhance operational efficiency. A particular steel

galvanization company based in Thailand was having trouble with its oil storage tank. The issue they were facing concerned the electrode equipment that was installed for level measurement. They were encountering problems where this sensor was telling them that there was the wrong amount of oil in the tank, therefore impacting the rest of the galvanization process.

Ultrasonic level measurement for oil storage

Engineers at the galvanization plant contacted trusted Pulsar Measurement partner Microcems in Thailand to help with the application, and they were happy to. Oil level measurement can be challenging because oil can give off a fume or vapor that makes it hard for traditional ultrasonic level sensors to penetrate. Additionally, some oils can cause erosion and other sensor damage due to chemical compatibility issues. However, due to advancements in echo processing technology by Pulsar Measurement, and a wide array of transducer options, Microcems was able to solve the issue with a dB10 PTFE faced transducer with an ANSI flange.



The PTFE coating on the dB10 helped protect the transducer from the vapor and other fumes given off by the oil, is resistant to corrosive chemicals and oils, doesn't absorb water, can withstand extremes of heat and cold, and many other factors.

Pulsar Measurement offers a wide array of level measurement transducers both with ultrasonic and radar technology for tricky applications. Choosing the right solution is crucial to ensuring you get the desired outcome. The common misconception is that radar technology is the only technology suitable for things like chemicals and oils, because of the vapors given off by such substances that can cause inaccuracies and unreliability. Not true for Pulsar Measurement ultrasonic technology. Pulsar Measurement's ultrasonic level measurement is highly accurate and a well-tested technology, with state-of-the-art DATEM signal processing which allows ultrasonic to be used in applications where other manufacturers struggle. When applied correctly, ultrasonic sensors produce more accurate readings than radar sensors do under similar conditions.

The right knowledge means the right solution

Equipped with the right knowledge, Microcems provided a dB10 PTFE transducer. The PTFE coating on the dB10 helped protect the transducer from the vapor and other fumes given off by the oil, is resistant to corrosive chemicals and oils, doesn't absorb water, can withstand extremes of heat and cold, and many other factors. In addition, the transducer was supplied with an ANSI flange to aid the installation on top of the tank – meaning that engineers from Microcems did not create a new tank entry point, and the exterior of the ultrasonic transducer is also protected from the oil inside the tank.

DATEM Echo Processing algorithms, found only in Pulsar Measurement units, helps the transducer to locate the true level of the tank, and helps it to focus on it as the level rises and falls by ignoring false echoes caused by obstructions or build-up inside the tank. The result is the end-user has the accurate and reliable measurement they are looking for.

The end-user at the galvanized steel plant is extremely happy with the Pulsar Measurement equipment, and after many years of use, the quality of the product shows as it is still working well.

To learn more about ultrasonic and radar technology, visit our website or contact your local Pulsar Measurement partner today.



A Pulsar Measurement dB10 transducer on site at a chemical plant in Thailand.

More Information

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

Partner Locator: www.pulsarmeasurement.com/partnerlocator



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