Safe, cost-effective level measurement
Endress+Hauser non-contact radar measures level in corrosive chemical tanks

Benefits at a glance

- Improved process safety due to gastight feedthrough
- Reduced wiring costs due to 2-wire technology allowing easy implementation into existing system
- Accurate measurement independent from product properties
- Reliable measurement without high costs due to high chemical compatibility issues
- Corrosion resistant non-metal antenna in the tank

A U.S. water treatment plant operating at 85 MGD capacity was in need of a measurement technology that would accurately and safely measure level in corrosive chemical bulk storage tanks.

The Challenge The plant was in need of reliable level measurement without the high costs associated with high chemical compatibility issues that could provide accurate measurement on chemical tanks with product density variations due to temperature changes (ambient or slightly above). Ultrasonic level devices are common in these applications; however, due to safety considerations when preforming maintenance, and the effect the vapors has on a mechanical ultrasonic pulse, these were not used. Therefore, the technology had to be both non-intrusive and non-contact. Differential pressure devices were also considered, however, due to high costs of exotic materials for wetted parts, this option was ruled out.

Our solution Endress+Hauser installed the Micropilot FMR53 non-contact radar device to measure the level in the corrosive chemical tanks. The FMR53 was a good fit for this application as the Micropilot is not affected by different product properties such as changing dielectric, HF fumes, caustic corrosion and changing specific gravities which was present in these corrosive chemical storage and day tanks.

Endress+Hauser

People for Process Automation

Results The installed FMR53 provided accurate measurements and was not affected by changing properties such as media, temperature changes, gas blankets or vapors. The FMR53 also provided safe, reliable level measurement without the high costs associated with high chemical compatibility issues.

ISO 9001 Certified

Endress+Hauser [EH]

People for Process Automation