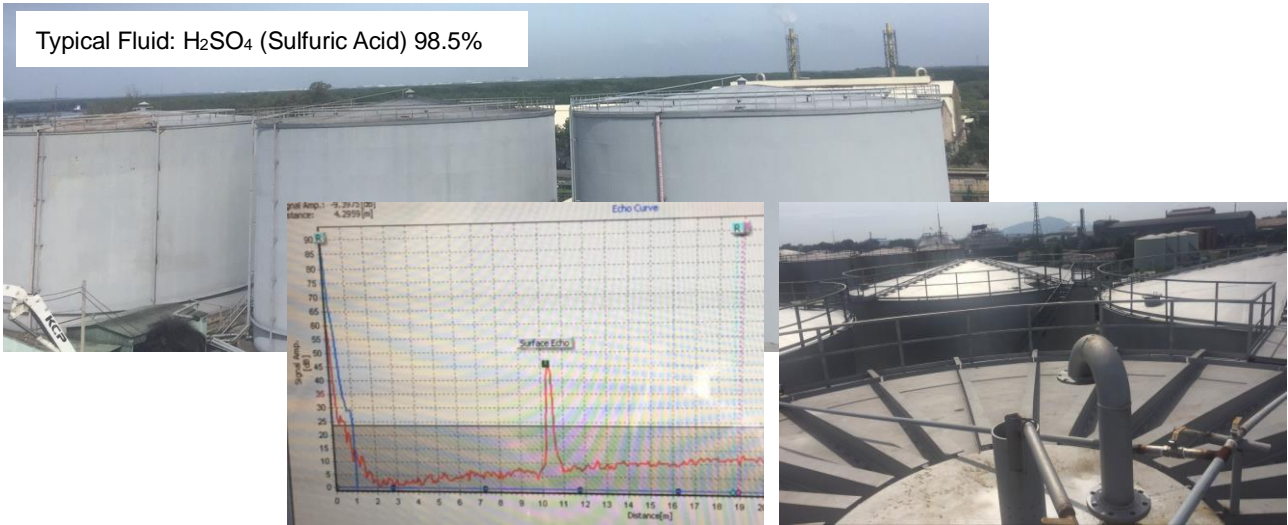


Radar Level Gauge Application Report 19

- Sulfuric Acid Tank Process -



Typical Fluid: H₂SO₄ (Sulfuric Acid) 98.5%

The KRG-10 radar level gauge features accurate, non-contact, level measurement with simple installation over a target fluid. In applications such as acid process liquid tanks where the sensing elements of contact type level instruments are exposed to corrosion and substance adhesion, non-contact means of measurement which are unencumbered by such concerns are preferable for durability and reliability of measurement.

At this particular site, the KRG-10 radar gauge provides stable measurement of fluid level, unaffected by atmospheric.

Other popular measurement methods include differential pressure sensors that detect the pressure exerted by the liquid's mass. Pressure is then converted to level measurement in accordance with preset densities.

This type of gauges is commonly applied in the chemical industry due to their simple construction and design which involves direct sensor-liquid contact (wet installation). Costly materials are involved due to required aggressive corrosion resistance.

Ultrasonic level gauges are also frequently employed as a non-contact means of level measurement. This type of gauge measures the round-trip transiting time of high frequency sounds to and from the surface of a liquid and converts this into distance. Ultrasonic level gauges however are easily affected by fog, vapor, pressure, temperature changes, and other environmental factors.

Radar level gauges, which incorporate electromagnetic waves (microwaves) on the other hand, do not require direct contact with liquids, density parameters or complex capacitance comparisons. Microwave-based level gauges are also least affected by ambient conditions.

In addition, the KRG-10 radar level gauge offers HART 2-wire loop communication protocol so customers can change any

parameter from a central computer station with PC and configuration software. The KRG-10's 4-key input menu display also allows parameter setting on site as an alternate method.

	KRG-10	Pressure	Capacitance	Ultrasonic
Non-Contact	○	×	×	○
Vapor (High Temp & High Humidity)	○ Least affected	○ Not affected	×	×
Temp. Change	○ Least affected	○ Not affected	○ Not affected	×
Sediment	○ Not affected	×	○ Not affected	○ Not affected
Durability	○ Isolated from tank ATM.	×	×	×

[Application Data]

Typical User : Port terminal
Target : Sulfuric Acid 98.5%

[Installation Data]

Main Unit : Radar Level Gauge KRG-10
Antenna : 4inch PTFE Sealing
Range : 18m

For more detailed information, please contact your local representative.

Representative in your Area