

Reliable Level Measurement  
Ensures Effective Inventory  
Control

chemical

SIEMENS

# Reliable Level Measurement Ensures Effective Inventory Control

## Challenge

Brenntag is the top distributor of industrial and specialty chemicals for process industries in Europe and Latin America, and the third largest in the US. It has 300 locations worldwide, sales of 4.3 billion Euros, and more than 8,900 employees.

Customers include water companies, metal refiners, textile and food manufacturers, and other industrial processors. Brenntag's process-oriented logistics meet customer needs for various chemical concentrations and quantities ranging from one IBC (a plastic container holding 1,000 liters) to a full road tanker.

The Brenntag facility at Lutterworth is the main distribution depot for the UK. Centrally located with easy access to motorways, this site handles hydrogen peroxide, glycerine, sulphuric acid, and many other chemicals.

Malcolm Forrest, Engineering Manager, is diligent about level measurement on the various storage tanks. "Managing our inventory is key," he said. "We need to accurately control stocks so we do not run out. We have contracts with our customers that must be honored."



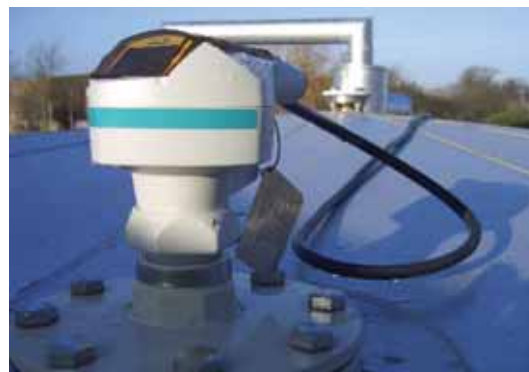
The level transmitter feeds its signal to this Siemens MultiRanger 200 ultrasonic controller, which displays a continuous level reading and operates low level alarms.

## Solution

In 2003, Forrest chose the Siemens MultiRanger® ultrasonic system to monitor level on two hydrogen peroxide tanks, and was impressed with the easy installation and reliable measurement performance. Now he uses Siemens ultrasonic and radar instruments for numerous applications.

In 2005, he conducted a trial on the main glycerine storage tank using the new SITRANS® Probe LR radar transmitter. Glycerine flows from this main tank to a buffer tank, from which it is dispensed into containers for shipment to customers. The radar transmitter continuously monitors level in the main tank. Using the Probe's 4-20 mA output circuit, the signal interfaces with a Siemens MultiRanger 200 ultrasonic controller located in the warehouse next to the buffer tank and repackaging area. Operators get a continuous level reading on the controller's backlit display panel. The controller's relays operate low level alarms.

The Probe LR is ideal for chemical storage applications. Its low frequency gives high immunity against condensation or deposits. Its high signal-to-noise ratio ensures reliable and repeatable measurement, and the internal integrated shield eliminates interference from the vessel nozzle. The patented Sonic Intelligence® advanced signal-processing software gives superior reliability, and Auto False-Echo Suppression software ignores interference from obstructions such as stirrers in the tank. The patented uni-construction polypropylene rod antenna has an integrated threaded connection that is hermetically sealed for superior chemical resistance. It is compact and easy



This Siemens SITRANS Probe LR radar transmitter installed on the glycerine storage tank provides reliable continuous monitoring that helps Brenntag effectively manage inventory.

to install, with a rotating head that aligns with conduit for easy wiring and adjusts for optimal visibility.

Recently, Forrest needed to replace another supplier's obsolete system on two hydrochloric acid tanks. The old systems could not measure level reliably in the difficult process conditions and fumes in this tank. Based on the success of the glycerine application, he installed SITRANS Probe LR radar transmitters with good results.

## Benefits

"We like to use the latest technology, and these instruments have all provided reliable, trouble-free operation," said Forrest. "We are happy with the products and pleased with the good service support."

"I was most impressed with the accuracy and repeatability of the measurement. On the glycerine tank, for example, the measurement is very accurate even when compared to readings on the tanker weigh bridge. Because we can rely so closely on the readings, we can manage our inventory effectively to meet customer demand. It's proven a cost-effective solution for us."