

Flour production plant improves inventory accuracy with Siemens radar level transmitters

Process Instrumentation



SITRANS LR560
Radar Level Transmitter

A large flour production plant in the Midwest United States produces and packages consumer grade flour for the US consumer market.

Challenge

The customer was looking for a more accurate means of measuring the flour levels in their two (2) 33 foot tall flour storage bunkers (bins) that are used to fill flour bags. They wanted an instrument that could reliably and continuously monitor the flour bin levels and send a 4-20 mA signal to a PLC network I/O module.

The customer had previously used other Siemens instrumentation and was already familiar with the high quality of the instruments.

The bins are very narrow with offset sloping hoppers near the bottom third, and a large screw discharge out of the bottom of the bin. The customer was concerned that once the level got into this sloped region, the level device would not be able to accurately track the bin levels.

Solution

The local Siemens representative recommended the 78 GHz SITRANS LR560 radar level transmitter for the application. Due to the narrow beam signal of the LR560 instrument, the sloped hopper area was never an issue.

The customer is now using a SITRANS LR560 level transmitter on each of the 2 flour storage bins, and is very pleased with the results.

Benefits

- **Improved process reliability:** Repeatable level monitoring over time means less risk of running out of inventory or having too much for storage availability or overflow. Customer was able to consistently “see” the flour level even during gravity filling in a very dusty environment.
- **Improved personnel safety:** No need for personnel to climb the tank to make sure the level monitor is functioning properly, or to clean off the instrument
- **Improved accuracy:** The reliable, continuous electronic monitoring takes away the chance of human error.
- **Easy to use:** Quick start wizard helps to make setup quick and easy.
- **Unique product features:** Narrow beam angle good for tall and narrow silos.
- **Local customer service:** Local Siemens representative provided excellent follow-up and set-up, which took just a few minutes.

About the SITRANS LR560 Radar Level Transmitter

The SITRANS LR560 2-wire, 78 GHz FMCW radar level transmitter for continuous monitoring of solids has a plug and play performance that is ideal for most solids applications, including those with extreme dust and high temperatures to +200 °C (+392 °F). The unit’s unique design allows safe and simple programming, using the intrinsically-safe, handheld programmer, without having to open the instrument’s lid.

The SITRANS LR560 transmitter includes an optional, graphical local display interface (LDI) that improves set-up and operation using an intuitive Quick Start Wizard and echo profile display for diagnostic support. Startup is easy using the Quick Start wizard, with a few parameters required for basic operation. SITRANS LR560 measures virtually any solids material to a range of 100 m (328 ft).

Advantages of the LR560 radar level transmitter

- Rugged stainless steel design
- 78 GHz high frequency provides a very narrow beam, virtually no mounting nozzle noise, and optimal reflection from sloped solids
- Easy-aimer option allows the user to direct the beam to the area of interest, such as a draw point of the cone
- Lens antenna is highly resistant to product build up
- Local display interface (LDI) allows local programming and diagnostics

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