

Flour mill increases production and silo capacity with Rosemount™ 5408

RESULTS

- Reduced safety stock
- Overfills prevented and accidents avoided
- Reduced loading traffic on site due to more accurate filling of the silos
- Increased production due to accurate inventory measurement

APPLICATION

Level measurement in flour silos

CUSTOMER

Pasta manufacturing company, Brazil

CHALLENGE

The customer required level measurement for their flour silos. The measurement was required to control the raw material and prevent overfills. Level control was key to the smooth running of the operation because lack of raw material could cause an unexpected production shutdown, while excessive flour in the silo could cause an overflow.

The installed guided wave radar was not working effectively in this application. The radar had a flexible twin lead and the flour created build-up on the probe, which created false readings. This was a continuous issue. Additionally, incorrect installation of the device led to the probe touching the silo wall. Because of these issues, the customer was unable to use the silo to full capacity.

Production planning was difficult due to the unreliable level measurement of the raw material and caused reduced production on site.

SOLUTION

The site realized that to obtain reliable measurements, they needed to use non-contacting technology. They installed four Rosemount 5408 Non-Contacting Radar Level Transmitters. The superior signal-to-noise ratio due to the Frequency Modulated Continuous Wave (FMCW) technology together with a unique algorithm designed for challenging solids applications made the Rosemount 5408 ideal for this application.



“We are now able to fill our silos to maximum capacity by using the Rosemount 5408 Level Transmitter. This has enabled increased production.”



Rosemount 5408 installed on the flour silo

The transmitters provide 7-day historical data which enabled the customer to track the radar's performance and detect unexpected events, including lack of air during the silo operation - which meant the issue could be solved before it became a problem.

A key feature utilized by the transmitter is Signal Quality Metrics (SQM). This enabled the customer to automate the air-flushing into the cone, preventing clogging of material in the antenna, guaranteeing a full-time strong surface reflection and increasing the measurement reliability.

The customer tried one device and was very happy with the reliable measurements obtained. This enabled them to get accurate and reliable inventory which helped production planning. As a result they ordered 16 units to provide level measurement in all their flour silos.

RESOURCES

Rosemount 5408 Non-Contacting Radar Level Transmitter

[Emerson.com/Rosemount5408](https://emerson.com/Rosemount5408)

Emerson Automation Solutions Industries

[Emerson.com/FoodandBeverage](https://emerson.com/FoodandBeverage)

“The air purging feature prevented build-up of flour on the antenna.”



Prior to using the air purging feature, the Rosemount 5408 antenna is coated with flour

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