



Level



Pressure



Flow



Temperature

Liquid
Analysis

Registration

Systems
Components

Services



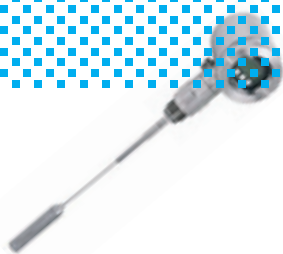
Solutions

Levelflex M FMP40 Guided Wave Radar Measurement in Soup- Food

FMP40 Guided Wave Radar used in Retorts



Bowl of soup



Levelflex M FMP40 Guided Wave Radar



Food varieties

Levelflex M FMP40 reduces downtime, saving company money.

Company profile

World's leading producer of soups with plant located in Marshall, Michigan.

Background

The customer was previously using capacitance probes. The units measure how much water level is in each drum. Over time, the Teflon insulation on the capacitance probe began to allow water to enter between the rod and the Teflon. This was caused from the continual temperature change that the retort sees. It would go from seeing cold to boiling water time after time.

After a period of time, the Teflon began to expand allowing water to get behind it and the unit would tell the PLC that the retort was full, even though it may not have been. This caused the system to go into alarm and a manual check was required to verify actual drum level. They manually checked the level using a bypass pipe that has a glass window. They have 24 retorts in all, so at any given time there were multiple alarms going off. This caused downtime, thus costing the plant money.

Solution

Endress+Hauser recommended the Levelflex M FMP40 Guided Wave Radar.

Application description

The machine that the FMP40's are used on is called a retort. Sealed cans with soup are put into the retort and locked into place. Using a combination of water and steam, the soup gets cooked while in the can. The drum inside the retort spins to insure all the cans are heated at the same rate. The FMP40 is inserted in a bypass pipe mounted on the side of the retort.

Instrument description

The Levelflex M is a top-mounted, compact level transmitter that operates with microimpulse radar on the guided time-of-flight principle. Fluctuations in the density, temperature, or build-up do not influence the measurement.

Measuring principle

The Levelflex is a "downward-looking" Time-of-Flight (ToF) measuring system which measures the distance from the process connection to the material surface. An electrical pulse is launched and guided down the probe. The pulses are reflected by the product surface, received by the electronics, evaluated and converted into level information.

Result

The Levelflex uses a simple stainless steel probe and eliminated the Teflon all together. The units were drop in replacement, thus no system modification was required. Since the installation, there has not been even one alarm! They replace 2 or 4 units every quarter or when the budget allows.

The customer has installed flow and pressure products in their plant. They are looking into installing more analytical products in the future.

For more information, contact
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Levelflex M FMP40 installation in canned soup production

ISO 9001:2000 Certified

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