

Food processor increases product consistency

using Siemens flow meters

Process Instrumentation



SITRANS FM1100F flow meter

Challenge

A large food processor mixes various batch portions of vegetables, meats, and liquids together in large vats during the process of making stew. They require accurate flow measurement of the ingredients going into the vats to maintain the quality and consistency of the end product.

The customer was using older, mechanical instruments to measure their flow rates in the process. Their mechanical meters required periodic maintenance and recalibration, plus provided inaccurate measurements resulting in inconsistencies in the end product.

Solution

To overcome these inaccuracy issues, the local Siemens representative suggested that the customer install a SITRANS FM MAG1100F electromagnetic (mag) flow

meter with PFA lining to measure the flow of the ingredients into the mixing vats. With a stated accuracy of $\pm 0.2\%$ of flow rate, the measurement helps to provide a higher quality and much more consistent end product.

Although the mag meters have a higher initial cost than the older mechanical instruments the customer had been using, the decrease in lost product has made the Siemens MAG meter the better value over time. Additional cost savings result from no maintenance requirements and less process downtime, along with quick and easy start up.

The MAG1100F flow meter's obstruction-free performance is unaffected by the suspended solids, viscosity, and temperature challenges typically found in food processes.

Flow Meter Design Benefits

- AISI 316 stainless steel enclosure
- Meets 3A standards and FDA conformity
- Suitable for CIP and SIP cleaning
- IP67 / NEMA 4X rating, optional IP68 / NEMA 6P for remote sensor
- Delivered with your specified connection. With a hygienic metal-to-metal design, the process grounding connection is automatic.
- Direct access to covered keypad and display

About the SITRANS FM MAG1000F flow meter

The SITRANS F M MAG1100F sensor is especially designed for use in the food, beverage and pharmaceutical industries. It is available with a variety of hygienic process connections and meets all sanitary requirements, including 3A standards.

Designed to meet the challenges present in the tough environment of the food and beverage industry, The MAG 1100F flow meter is ideal where extreme temperature changes, humidity, condensation, hose-down and CIP cleaning are ever present.

With the unique and flexible adaptor concept, one flow meter fits nearly every process connection. Adaptors are offered for clamp connection, threaded connection or weld-in type connection for direct welding into the process piping.

A complete flow meter consists of a SITRANS FM MAG6000 transmitter and a MAG1100F flow sensor tube. Features include optional Communication protocols, batch function and an accuracy of +/- 0.2 % of flow rate

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