

Application News

Electromagnetic Flowmeter Handles Milk Transfer Measurement

Industry: Food & Beverage

Service: Flow Rate/Total

Fluid: Milk

Overview

Dairy farms across the country produce many tons of raw milk each day, and this product needs some way to get to market and eventually our kitchen tables. Dairy operations store raw milk in bulk holding tanks, and then transfer the milk to tanker trucks for delivery. Accurate measurement of this process is very important to both the farmer and the processing plant.

Situation

A major international dairy equipment manufacturer with products ranging from bulk cooling tanks to automated milking systems needed to measure the flow of raw milk from their customers' bulk tanks to tanker trucks. Bulk tank dips can lead to questionable measurement of the milk being transferred. The customer was seeking a cost-effective, high performance sanitary flow meter to do the job.

Solution

After considering the application requirements, Flow Technology delivered its EL2400 Series Electromagnetic Flow Meter. This flow meter includes best-in-class features at a significantly lower price than competitive mag meters. It provided an accurate method for measuring the flow of milk during tanker transfer, as well as a CIP (Clean-in-Place) capability. The EL2400 features sanitary end connections, no moving parts, and no pressure drop.

EL 2400 Series meters are manufactured from 304 stainless steel and lined with PTFE. The standard electrode material is 316L SS with options for Hastelloy C and Titanium. End connections on this series are typically Tri-Clamp, however, the meters can also be supplied with DIN 11851 fittings.

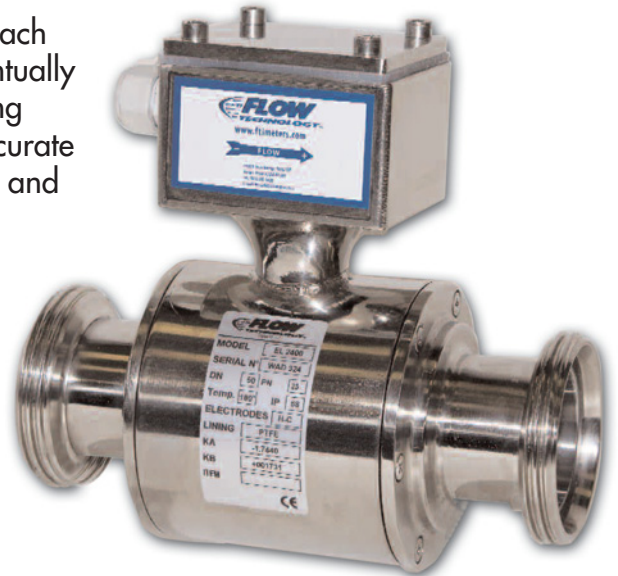
System Description

The EL2400 Series Electromagnetic Flow Meter was paired with the MC308C Transmitter with display. The two-inch magnetic meter handles the customer's flow range and ensures accuracy not only in turbulent flow, but also during the transitional and laminar flow ranges.

The MC308C Transmitter, mounted remotely in this application, is a versatile solution for batch control. The transmitter can be reset via a digital input, and its 4-20mA output can be transmitted for data logging purposes. The MC308 offers reverse flow indication, alarms, extensive filtering, and diagnostics for empty pipe detection and electrode malfunction.

Technical Information

Flow Meter (Model Number): EL2400-050ATCXPLSA
Transmitter: MC308CCVM2F3S21N
Flow Rate: 6.6 to 330 GPM
Fluid: Milk



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