Flow Measurement in the Food and Beverage Industry.

Flow measurement is a vital part of food and beverage manufacturing, from measuring ingredients and cleaning processes to filling vessels. In the food and beverage industry, manufacturers' main priorities are product quality and hygiene. However, flow measurement in this industry can present many challenges while at the same time minimizing waste and energy use.

There are many different types of flow measurement including electromagnetic flow meters, turbine flow meters, and non-contacting clamp-on flow meters. A few drawbacks of contacting solutions like electromagnetic flow meters are that they compromise hygiene standards, will require system shutdown for installation, and need routine maintenance to clear the sensor of any debris.

Signal Lost for Energy Drink Manufacturer

OSOTSPA, a beverage manufacturer based in Thailand was having some trouble with their existing flow meter. The flow meter was supposed to be measuring water for their energy drink operations and transmit a 4-20mA signal back to the plant's existing PLC system.

Unfortunately, the existing flow meter had lost signal, and various parts of the system had broken or were not working properly.

Engineers at OSOTSPA reached out to Intech 2000, Pulsar Measurement partners in Thailand. The service engineering team at Intech 2000 went to look at the application and after listening to the customer requirements decided that the TTFM 6.1 Transit-Time Flow Meter would be the ideal solution. The end-user wanted to install a new flow system without disrupting the flow and without cutting or modifying the pipeline – which would prove costly for the beverage manufacturer.

Transit-Time Technology

Using transit-time technology, the TTFM 6.1 works by measuring the time-of-flight difference for ultrasonic sound pulses transmitted from one transducer to another. Depending on the mounting configuration, the signal may cross the pipe once, twice or four times. The time between

The TTFM 6.1 features clamp-on transducers, that clamp to the outside of the pipe and removes the need for system shutdown or cutting into the pipe.

transmitted and received signals is precisely measured by the flow meter. Ultrasonic signals are sent upstream and then downstream with the transducers alternating their functions as transmitter/receivers. Because the signals need to travel across the pipes, the TTFM 6.1 is suitable for clean unaerated liquids.

The TTFM 6.1 features clamp-on transducers, that clamp on to the outside of the pipe and removes the need for system shutdown or cutting into the pipe. The interchangeable A, B, and C sensor types mean that the flow meter is suitable for a wide range of pipe sizes and materials.

Successful Installation for Intech 2000 Engineers

Intech 2000 installed four TTFM 6.1 Transit-Time Flow Meters at the beverage manufacturer and all the units are operating and sending readings back to the existing PLC without any problems. The collaboration between the customer service teams from Pulsar Measurement and Intech 2000 means that service replacement modules and checkups are helping to keep the process running as smoothly as possible.

Pulsar Measurement offers a range of flow and level measurement solutions for a variety of applications. Find your ideal solution by using our product configurator or by speaking with our team of experts.

To find your local Pulsar Measurement partner visit our partner locator: https://pulsarmeasurement.com/partnerlocator

More Information

TTFM 6.1: https://pulsarmeasurement.com/ttfm-6-1

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