

Micro Motion® Flowmeters Improve Batch Blending Efficiency and Quality

RESULTS

- 78% reduction in inventory losses
- Improved product quality and uniformity
- Reduced product touch-up
- Sped up production time
- Replaced three PD meters with one Micro Motion meter
- No recalibration or ongoing maintenance required



APPLICATION

Batching various components to produce a final product is a common process in the food industry. Typically, load cells or flowmeters are used to control this type of blending operation.

CHALLENGE

A manufacturer of salad dressings was using positive displacement (PD) flowmeters to monitor and control the batching of six different components in the manufacturing process. Using PD flowmeters, the customer experienced significant inventory losses and difficulties maintaining product consistency.

These problems occurred because several of the salad dressing ingredients exhibited dramatic changes in their physical properties with changes in temperature. Consequently, delivering the same volumetric amount of each ingredient on each batch did not guarantee a consistent product because the mass to volume ratios varied.

SOLUTION

Plant management decided to replace the six PD flowmeters with four Micro Motion® Coriolis flowmeters on one of the blending systems. As a result of the switch, overall inventory losses were reduced from 50,000 pounds per month to 11,000 pounds per month. Product quality and uniformity improved, and there was a reduction in the number of required touch-up operations on the final products. Production time was also reduced an average of two hours per day.

Micro Motion meters provide inline blending for more consistent product, regardless of fluid properties.

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In addition, the ability to monitor mass flow independently of the fluid allowed one Micro Motion mass flowmeter to replace three PD meters. The system was designed so that on a periodic basis each meter could be checked by using actual products batched onto a scale. In almost a year of consistent use, there has not been any need to recalibrate and the Micro Motion meter accuracy is identical to the very first batches that were run.

