

Perry's Ice Cream Improves Batch Mixing, Decreases Downtime, and Reduces Costs

RESULTS

- 15% improvement in first pass yields in batch mixing
- \$4,000 yearly revenue increase from downtime prevention
- \$2,500 per year saved in maintenance and repair costs



APPLICATION

Soft ice cream processing

CUSTOMER

Perry's Ice Cream in Akron, NY

From its humble beginnings in 1918 using ice and salt tub freezers, hand cranks and horse-drawn delivery wagons, Perry's Ice Cream has grown to be one of the most modern, state-of-the-art production facilities in the country.

CHALLENGE

As part of the ice cream manufacturing process, Perry's has used hygienic style magnetic flowmeters throughout the plant to measure the addition of various ingredients and the actual flow of soft ice cream, in both the final product and in several intermediate stages. Some of the flowmeters were at critical measuring points, and the failure of these meters would shut down entire process lines. The problems occurred during wash down cycles that are required to meet sanitary regulations. Water repeatedly entered the flowmeter housings, causing the electronics to eventually fail. Perry's incurred large maintenance costs, flowmeter repair costs, as well as lost production.

SOLUTION

Perry's replaced their existing magnetic flowmeters with the Rosemount 8721 3A authorized hygienic magmeter. Since the Rosemount transmitter with the Local Operator Interface (LOI) option comes standard with dual compartment housing, any condensation or water that enters the field terminal side of the housing does not find its way to the electronics side, and virtually eliminates failure from water damage. To make it more secure, the LOI option with "Through the Glass Programming" was purchased. The customer configured the unit and utilized the flow totalizer options without exposing the electronics to the wet environment. In doing this, the customer extended the life of the flowmeter.

"We have not had one problem with our magnetic flowmeters or our T-Series meters since we installed them 4 years ago. That's why I buy Rosemount and Micro Motion; I never have to worry about reliability."

Dave Foley
Senior Plant Engineering Technician



Perry's Ice Cream production floor

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Dave Foley, Senior Plant Engineering Technician at Perry's, decided to try the Rosemount magnetic flowmeters because of his experience with the 3051 pressure and level instruments. "We've had great experience with the 3051 in both pressure and tank level applications. We really do 'set and forget' them. We put them in nearly two years ago and have not touched them since."

Since Dave installed the Rosemount magmeters, he has not had one shut down due to instrument failure. "The old magmeters would fail a couple of times a year because of our wash down environment. That not only cost us a minimum of \$2,500 a year in repair, replacement, and maintenance fees but each failure would shut our line down. We would lose a barrel off one of our freezers every time a magmeter failed." Dave estimates two hours of lost production for each instrument failure, or \$4,000 a year.

Perry's has continued to improve their operation by going to mass-based flowmetering on several ingredients. "We now use the Micro Motion straight-through T-Series flowmeter to measure mass directly on our creams, skims and raw milk. We installed one of them three years ago in our batching mix area and added two more to our liquid sugar lines last year. Since then we have shown a 15% improvement in our first pass yields". They also added four "3A" authorized T-Series meters on the delivery lines from the pasteurized tank to the flavor vats. Since Perry's works with many different densities in their ice cream production, direct mass measurements were a good solution in this area.

Perry's Ice Cream continues to strive for manufacturing excellence. In this flow-intensive process they have improved uptime, reduced maintenance and troubleshooting, and improved their first pass yields. The Rosemount and Micro Motion flowmeters have also helped them become more flexible in their product diversification. "We have not had one problem with our magnetic flowmeters or our T-Series meters since we installed them four years ago. That's why I buy Rosemount and Micro Motion; I never have to worry about reliability."

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Direct mass measurement of products flowing through Micro Motion 3A authorized T-Series meters has helped to improve first-pass yields at Perry's by 15%

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