



ICE CREAM PRODUCTION PLANT REDUCES MAINTENANCE AND IMPROVES QUALITY WITH VIBRATING FORK TECHNOLOGY

Customer

Ice Cream Production Plant in Europe

Application

Level detection of ammonia in ice cream freezers

Challenge

An Ice Cream Production Plant had challenges detecting the amount of ammonia used to freeze the ice cream mixture before sending it into the shape forming machine. The temperature of the ice cream mixture is adjusted by the amount of ammonia and ensures proper cooling around the ice cream outer shell.

Previously this customer tried using a switch produced by another manufacturer. These switches were unsuccessful because ammonia leaked into the electronics. Additionally, they were unable to withstand the working temperatures and humidity of the environment. Inadequate level detection led to several negative business results.

Since ammonia is a hazardous liquid, leakage into the electronics risked exposure to the surrounding environment and contamination of process. This resulted in decreased product quality and increased health, safety, and environmental (HSE) risks. The unreliable level measurement also led to rework, additional maintenance, and ultimately decreased availability.

Results

- Reduced maintenance costs
- Increased ice cream quality
- Decreased health, safety, and environmental risks



Figure #1: Installed Rosemount™2110 Compact Vibrating Fork Level Switch

ICE CREAM PRODUCTION PLANT REDUCES MAINTENANCE AND IMPROVES QUALITY WITH VIBRATING FORK TECHNOLOGY

Solution

This customer installed a Rosemount 2110 Vibrating Level Switch to replace the previously incompatible technology and provide reliable ammonia level detection. The rugged stainless steel design of the Rosemount 2110 enables it to operate in low ambient temperatures and fulfill the requirements of IP66/67. Additionally, the transmitter Heartbeat LED gives status and health information to ensure that the electronics are unaffected by the harsh ammonia environment.

This ice cream production plant experienced many positive results after the installation of the Rosemount 2110. They no longer had maintenance costs associated with a deteriorating level switch. With a reliable level measurement, they were able to optimize the ammonia levels and thereby improved the quality of the ice cream. Lastly, the compatible level switch decreased the risk of health, safety, and environmental hazards.

Resources

Rosemount 2110 Vibrating Fork Level Switch
[Emerson.com/RosemountLevelSwitch2110](https://emerson.com/RosemountLevelSwitch2110)

Emerson Food & Beverage Industry
[Emerson.com/RosemountFoodAndBeverage](https://emerson.com/RosemountFoodAndBeverage)

For more information, visit
[Emerson.com/Food-Beverage](https://emerson.com/Food-Beverage)

The Emerson logo is a trademark and service mark of Emerson Electric Co.
Brand logotype are registered trademarks of one of the Emerson family of companies.
All other marks are the property of their respective owners.
©2023 Emerson Electric Co. All rights reserved.

00830-0900-4029 Rev AA