



Level



Pressure



Flow



Temperature



Liquid Analysis



Registration



Systems Components



Services



Solutions

OUSAF11 In-line Milk/Cream Spill Control-Food

Continuous monitoring of milk/cream loss with NIR probe in waste stream



Milk and cream products



OUSAF11 NIR sensor with OUM910 series transmitter



OUSAF11 submerged in waste stream

Loss of milk/cream during production is costly, plus fines can be assessed for the increased BOD sent to a wastewater treatment plant.

Customer profile

Milk product processing plant.

Application description

Preventing the loss of product in any manufacturing process is top priority. The loss of milk or milk products down the drain is not only costly, but the company also faces the risk of fines for the increased BOD sent to the wastewater treatment plant.

Application Challenges

Attempts to monitor and control product loss in a manufacturing process usually involves collecting grab samples followed by laboratory analysis.

This is time consuming and like any offline quality control procedure the data is not instant. Correcting the process based upon the information from lab samples may result in larger production spills due to the time lag between the sample collection and the lab result.

Solution

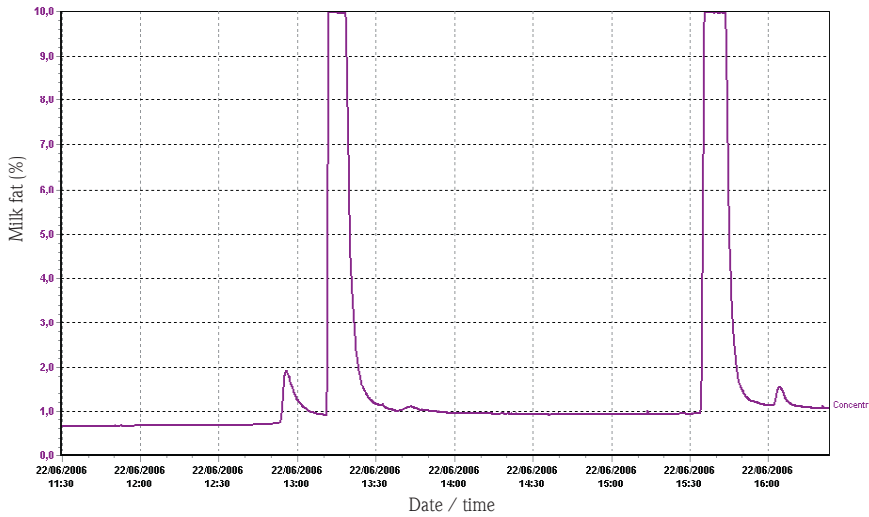
Continuous monitoring of waste water for the Milk/Cream product spill with a Wedgewood in-line monitor. The use of a simple NIR probe from Endress+Hauser allows constant monitoring of the waste stream. The sensor detects milk fat and as soon as milk fat flows through the sensor an alarm is generated to warn the operators of product loss.

The sensor is simply submerged in the effluent stream with an integrated holder to keep the sensor in place.

No maintenance required on the sensor and the application has been proven by more than 30 installations in Europe.

For more information, contact
Endress+Hauser, Inc.
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Figure 1



Benefits

More sensitivity in the low end. Early detection of phase change.
 More importantly, when product does not produce a big change in conductivity or if the difference in conductivity is low.

As shown in Figure 1, continuous monitoring allows instantaneous determination and alarms of product loss. This loss may have gone undetected using lab analysis only.

In addition to continuous monitoring, the OUSAF11 NIR sensor provides enhanced sensitivity at the low end for products, such as dairy, that do not have a large difference in conductivity compared to water (Table 1).

Table 1

	Water	Whole Milk	Cream
Milk fat (%)	0	1	1
OD (optical density)	0	0.186	0.5
Conductivity (µS/cm)	757	814	796

ISO 9001:2000 Certified

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