

CIP drain monitoring for product loss detection

Application

A VOM backscatter turbidity sensor tracks product losses in CIP drains. A process-specific correlation can support COD estimation. Milk, cream and whey losses can increase organic loading. Validate the correlation against laboratory COD results; dissolved sugars may not be represented by turbidity.

Measurement and control

Place the VOM probe in the CIP drain to monitor product carryover during rinsing. Select wetted materials and seals for the cleaning chemicals and operating conditions. Remote electronics provide a continuous 4-20 mA signal to the PLC. Review recorded spikes to identify loss events. Compare the first rinse with the expected process baseline. Investigate unexpected peaks and adjust product recovery where needed. The setup can be moved to another drain after the process is optimized.

Using the measurement

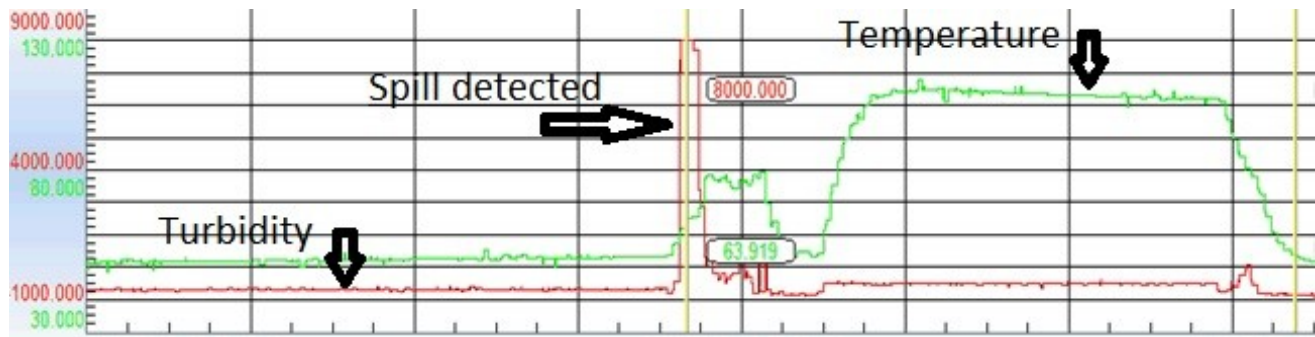
The trend shows product carryover during rinsing. Investigate the timing and size of each peak to identify its source and reduce avoidable losses. The temperature trend can help identify which process or cleaning step produced the discharge.



VOM probe with remote electronics

Features and application details

- Turbidity range 0-10000 NTU
- Measurement history
- Temperature output on the second mA loop
- Long-life LED
- Stainless steel 316L cable
- Remote electronics
- Select enclosure and wetted materials for the installation



Recorded turbidity and temperature response