

Cream concentration control after separation

Application

Monitor cream concentration at the separator outlet and adjust back pressure to maintain the target fat content.

Measurement and control

Install the sensor after the separator and before the back-pressure valve. The PLC uses the sensor signal to adjust the valve as cream concentration changes. Operators can also read the sensor display and adjust the valve manually.

Application results

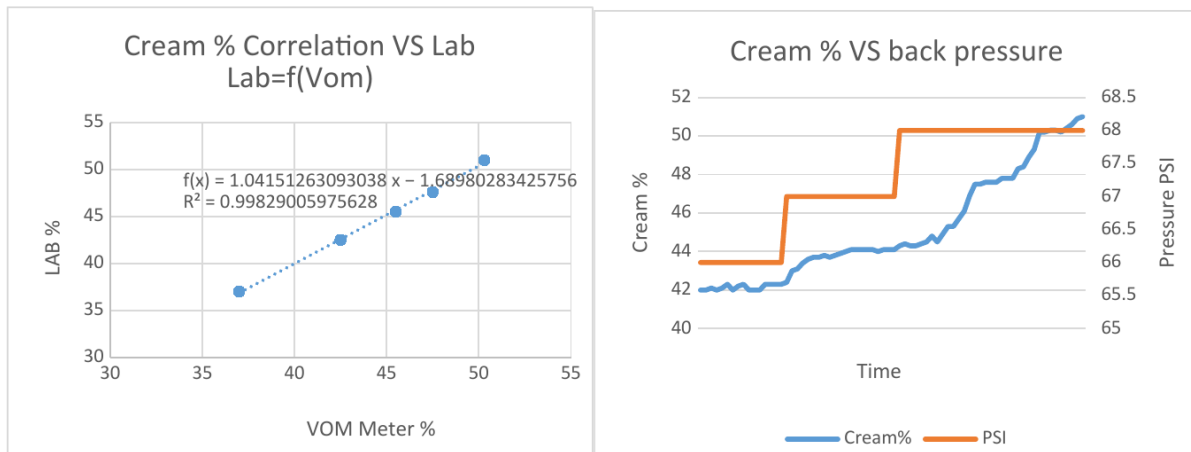
The displayed cream concentration follows changes in back pressure. The response begins immediately and stabilizes in 3-4 minutes. The reported comparison with laboratory results gives $R^2 = 0.9983$. Laboratory measurements were taken two days after calibration, with agreement reported as $\pm 0.8\%$. Sensor resolution is 0.1%. In this application, product yellowness did not affect the result. Six calibration points are required; the calibration curve is loaded before delivery.



Cream line sensor installation

Features and application details

- FAT range: 20-70%,
- Suitable for CIP,
- certificate: Food grade 3A
- Process fitting: Tri-clamp, or welded coupling
- Output: 4-20 mA
- Power: 24 V DC
- Remote display available
- Accuracy 0.1% on total range



Cream concentration correlation and response to back pressure