PAINT INDUSTRY

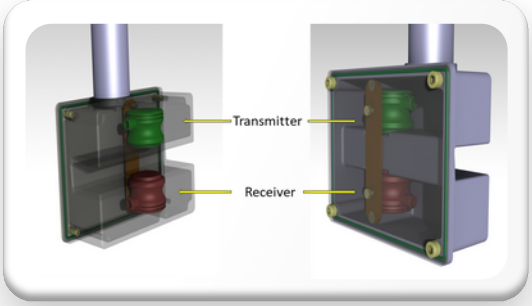
REAL-TIME MONITORING OF VISCOSITY AND TEMPERATURE IN PAINT MIXTURES MAINTAINS PAINT CONSISTENCY AND IMPROVES PAINT QUALITY

The case study explains how the paint industry overcome the problem of monitoring the continuous viscosity of the paint, which directly affects its quality. The paint mixture homogeneity monitoring involves ensuring consistency and uniformity in paint formulations throughout the manufacturing process.By closely monitoring the composition, color, viscosity, and other key parameters of the paint mixture throughout the manufacturing process, the manufacturers can guarantee that each batch meets the desired quality standards.

Overall, paint mixture viscosity and temperature monitoring plays a crucial role in ensuring product quality, regulatory compliance, and customer satisfaction in the paint manufacturing industry.Consistency in paint formulations is essential for maintaining the brand reputation and meeting customer expectations.

CHALLENGES

- The most challenging process is testing the paint mixture samplings in the laboratory by holding the production process.
- In a laboratory setting, paint samples are typically measured using instruments such as spectrophotometers or colorimeters. Measurements are typically taken on static samples, which means the paint must be prepared and brought to the lab for analysis.
- Traditional methods of monitoring paint homogeneity, such as manual sampling and visual inspection, are often time-consuming, labor-intensive, and prone to human error



3D Model of XYMA Sensors

Fixture inside the tank and
Overall System setup in Schneider Electric

SOLUTION

- Our XYMA Analytics product PoRTS is multi-parameter measurement sensor to continuously monitor viscosity, density and temperature of a fluid with high reliability and precision using single ultrasonic waveguide.
- The edge computing unit in the XYMA Electronics Unit is capable of performing advanced computations to extract temperature data from the received ultrasonic signals. The output from the edge classifiers is transmitted to the dashboard using industrial standard, wireless (or wired) communication technology using a transmitting unit. The status can be monitored in the client DCS system and also can be displayed in XYMA's customizable dashboard.
- It can measure the viscosity from 50 cP - 15000 cP, density from 700 kg/m³ - 1200 kg/m³, Temperature: 20°C to 400°C
- The AI- Powered soft sensors can provide 3D temperature profiles of any asset. The dashboard gives timely alerts to safely maintain industrial operations.
- Our XYMA sensors are compatible for all industrial standards and electronic unit is designed with ATEX certification assures that product has tested and met the necessary safety standards to operate in potentially hazardous environments.

XYMA ANALYTICS
Sensor Driven Decisions