



CARTIERE DEL GARDA REDUCES COSTS AND WASTE USING EMERSON'S MICRO MOTION DENSITY METER



Micro Motion CDM, Density and Concentration Meter

RESULTS

Improved product quality

Reduced waste

Eliminated the need for additives

Reduced production costs



Application

The customer, Cartiere del Garda, operates one of the most modern paper mills in Italy. In this paper mill, the customer measures the concentration of kaolin and other additives used in the paper coating process.



Challenge

The mill specialises in high-quality coated papers. The coating mixture included expensive additives to prevent problems caused by entrained air, which was generated by the recirculation system on the feeding tank. Eliminating the need for additives would reduce production costs and enable significant annual savings for Cartiere del Garda.

However, removing the additives meant that there would be air entrained in the coating mixture at up to 20 per cent volume. Although the Micro Motion® Coriolis flowmeter previously used to monitor the concentration of the coating mixture had provided reliable and accurate results over many years, it was not designed to provide the same degree of density measurement accuracy when operating under these entrained air conditions.

The company needed an on-line, solid-concentration measure of the coating solution, directly at the film coater machine feed.

A minimum accuracy of +/-1 percent of solids was required to ensure paper quality and avoid waste caused by out-of-specification batches.



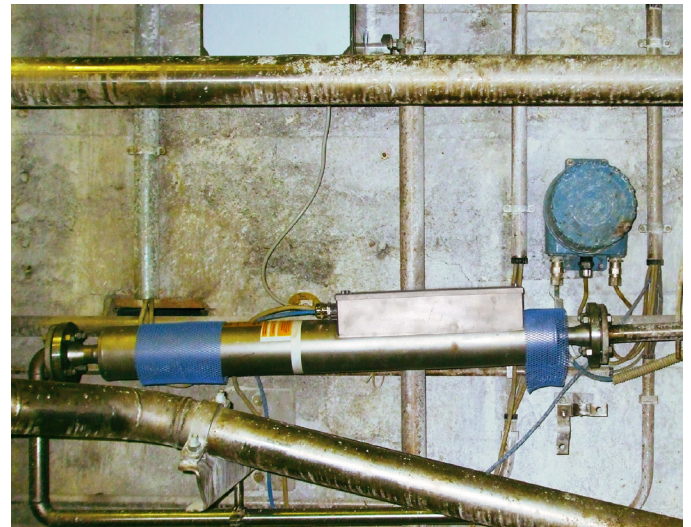
Solution

Cartiere del Garda chose a Micro Motion 7845 Density and Concentration Meter for this challenging application. The company specified the advanced electronic, entrained gas version, which is designed to accurately measure density in aerated liquids – providing a final accuracy of better than +/- 0.5 percent with very high stability and repeatability. Micro Motion has since updated their liquid tube density technology and replaced the 7845 with

the new CDM (Compact Density Meter). The CDM can provide an analog 4-20 mA or digital signal to customer's controls systems, related to line density. With this installation, the density value sent to the control system is then used to calculate percent solids.

The Micro Motion CDM Density and Concentration Meter uses a vibrating tube technology to measure density. As the liquid density changes, it affects the vibrating mass of the density meter. The change in vibrating mass then affects the resonant frequency, which is inversely proportional to the density of the process fluid. By monitoring the resonant frequency and applying calibrated conversions, the CDM provides highly accurate in-line density data.

The Micro Motion CDM Density and Concentration Meter is rugged, reliable, and requires minimum maintenance. The meter is calibrated in an ISO 17025 traceable lab, at elevated temperature and pressure conditions to simulate typical process conditions, improving real-world performance.



7845 Installation at Cartiere del Garda