

Micro Motion® Coriolis Meters Revolutionize Production Process for Colored Ceramics

RESULTS

- Repeatability and consistency up from 70% to 90%
- Equipment availability increased by 50%
- Production rejects reduced by over 90%
- 95% reduction in space requirements, and 50% initial investment savings



APPLICATION

Euroelettra Sistemi SpA, a ceramics company located in Marmiolo, Italy, runs a blending process that mixes the suspension and the coloring used in the production of colored ceramics.

CHALLENGE

Slip coloring, which entails a number of difficult technical and environmental issues, has always been a problem in the ceramics industry. It is difficult to obtain a homogeneous color throughout a production batch, and variations in the mixture can result in product inconsistencies and wastage.

Euroelettra Sistemi SpA has developed many systems for the ceramic industry that increase productivity, reduce costs, and improve product quality. With these objectives in mind, Euroelettra wanted to use the latest measuring technologies to increase the repeatability and consistency of the slip coloring process used in the production of colored ceramics.

SOLUTION

Euroelettra Sistemi realized that the most efficient mixing process would be a skid-based unit to accurately monitor and control the separate materials being delivered.

“Emerson’s Micro Motion® Coriolis technology applied to our skid blending system has enabled significant productivity and efficiency benefits. Customers are experiencing up to 30 percent improvement in production quality compared with the traditional approach.”

Mauro Pifferi
Sales Manager
Euroelettra Sistemi SpA

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For more information:
www.EmersonProcess.com/solutions/chemical
www.micromotion.com



The accuracy and measurement capabilities of the Micro Motion® T-Series Coriolis meter from Emerson, which provides both mass flow and density measurements, enables the color and the slip to be blended in exact mass proportions making it easy to achieve a consistent color hue even though the actual blended volume is small.

The skid consists of two tanks: one for the slip and the other for the coloring agents. The Micro Motion meters measure precisely the mass flow and density of each component to ensure the repeatability of the final product. Following the introduction of this type of skid system at a manufacturer of floor and wall tiles, repeatability and consistency was increased from 70 to 90 percent.

The Micro Motion meter diagnostics allow the blending system to identify build-up of material in the flow tubes. Combined with the easy-to-clean straight-tube design of the T-Series meters, this can improve system availability by up to 50%. The resulting homogeneity of the material supplied has led to a reduction in production rejects of over 90% compared to previous skid blending system trials.

The compact skid system obviates the need for much of the equipment associated with traditional systems (tanks, agitators, mills, etc.), which represents a 95% reduction in space requirements. Because there is no continuous agitation, power requirements are significantly reduced, and the simplified cleaning process minimizes water consumption. Initial investment costs are reduced by 50 percent, including reduced time to install, set up, and calibrate the Micro Motion equipment, which minimizes the time to full production.

The new system based on Emerson technologies and Micro Motion Coriolis meters addresses the long-standing problem of color mixing in the production of colored ceramics. It increases production and reduces costs by taking the uncertainty out of the mixing process to give high levels of repeatability and quality.

“Our skid based system dispenses with mixing tanks and significantly reduces power and water consumption. The accurate monitoring and control provided by the Micro Motion Coriolis flowmeter increases production efficiency by 50%.”

Mauro Pifferi
Sales Manager
Euroelettra Sistemi SpA

