

Optimize your production process with RheoStream®
- a process rheometer that offers real-time viscosity measurements.



BATTERY SLURRIES

Achieve precise viscosity from the outset. Eliminate coating challenges.



CHALLENGE

Viscosity of battery slurries is important for several reasons: coating uniformity, manufacturing efficiency, electrode performance, material distribution and cell assembly.

Traditionally, viscosity is monitored using off-line methods, or in-line viscometers.

Manual methods are sensitive to human errors and do not allow for real-time control. In-line viscometers lack temperature control, are time-consuming and unable to capture crucial rheological properties.



SOLUTION

On-line Instrument - RheoStream® is fully automatic and integrates seamlessly into production lines (at mixing tank or slot-die machine), sampling automatically and offers results without interrupting the manufacturing process.

Real-Time Monitoring - (2 minutes per sample measurement displayed at 3 selected shear rates) gives insights for precise and instant adjustments to maintain optimal viscosity level during the production and across different batches.

High Accuracy and Precision - eliminating variations through reliable and persistent results.



BENEFITS

Real-Time Quality Control - any deviation in viscosity can be immediately detected, allowing for swift adjustments in the production process to ensure the desired material distribution.

Save Time, Reduce Waste and Rework - this leads to increased efficiency, reduced costs, and improved overall production output.

Consistent Coating Uniformity and Battery Performance - The continuous and comprehensive viscosity analysis secures the quality to ensure the longevity and reliability of the final battery product.

APPLICATION EXAMPLE

- 5 different battery slurries were measured with RheoStream: 4 water based, 1 solvent based. Shear rates between 1.5 -1000 s⁻¹. Pre-set and constant temperature of 23 °C. Viscosities were obtained every 2 minutes.
- 15 measurements were performed in each point (shown as circles in the Application Range plot, right) with great precision, better than 2%.
- Cleaning is done automatically during production stop with either water or solvent (400 ml/cycle).

RheoStream®FCX

RheoStream is also available for application in the production of solvent products, certified for ATEX Zone 1



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RheoStream® Application Range

