

DENSITY MEASUREMENT FOR MILK OF LIME

Increasing quality and cost efficiency
in the sugar production



DENSITY MEASUREMENT IN THE SUGAR PRODUCTION PROCESS

The ability to monitor and control crucial production process steps is key to achieving high quality products. In the sugar production, there are several critical process points where accurate and repeatable measurements are required. Among them are continuous and batch crystallisation vacuum pans, evaporation stations, milk of lime and others. Berthold Micro-Polar Brix LB 565, a state-of-the-art microwave measurement technology system, can precisely and reliably measure the density or concentration online. Trends can be recognised but more importantly, fast process counteractions can be carried out ensuring high product quality and cost-efficient production.

Accurate and repeatable milk of lime measurement

Concentration measurement and control of milk of lime is critical to ensure proper quality and cost stability. Naturally, thin juice contains impurities and non-sugar substances which are eliminated in the clearing process. The thin juice is cleaned by adding a known concentration of milk of lime. To control the right dosing of lime milk concentration, a Micro-Polar Brix measurement is used in many factories worldwide. On account of the sophisticated microwave technology, a highly reliable and repeatable concentration measurement is achieved to monitor and control the quality of the milk of lime. Multifrequency technology and reference cables for measurement stability are incorporated to ensure a consistent measurement result. Sensors are also available with a water flushing feature to reduce product build-up on antennas. The menus on the Micro-Polar Brix transmitter make calibration and start-up easy to accomplish.

Fields of application

Milk of Lime (MOL) is a suspension of calcium hydroxide in water which is produced in the slaker. The ratio of quick lime and water should be maintained in a range to achieve a MOL with a nominal density of 22.5 °Be. With an online measurement, the process can be controlled and operated continuously, without expensive downtimes or delays. The LB 565 in combination with a container probe or a FlowCell is used in the slaker (or after the slaker) to control the optimal density of MOL thus increasing process efficiency..

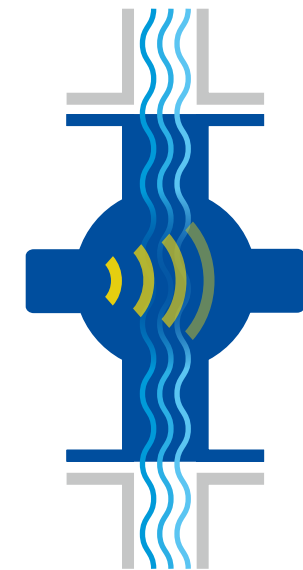


Customer Benefits

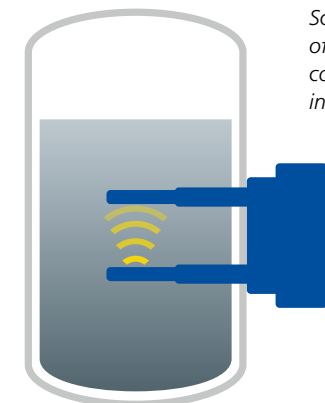
- Online density measurement
- Precise and representative real-time data for improved process control
- Optimal juice purification results
- Cost efficient use of raw material
- Integrated reference line for disturbance-free measurement
- Reliable, accurate and repeatable measurement resulting in consistently good quality
- Easy installation and calibration

Technical Features

- State-of-the-art microwave measurement
- Sturdy transmitter and robust sensors
- Pt100 for temperature compensation
- Maintenance free measurement
- Installation options inside the slaker, at pipelines or in tanks
- Sensors with and without flushing system flushing



*Schematic representation
of pipe installation using
FlowCell*



*Schematic representation
of tank installation using
container probe with
integrated flushing device*



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