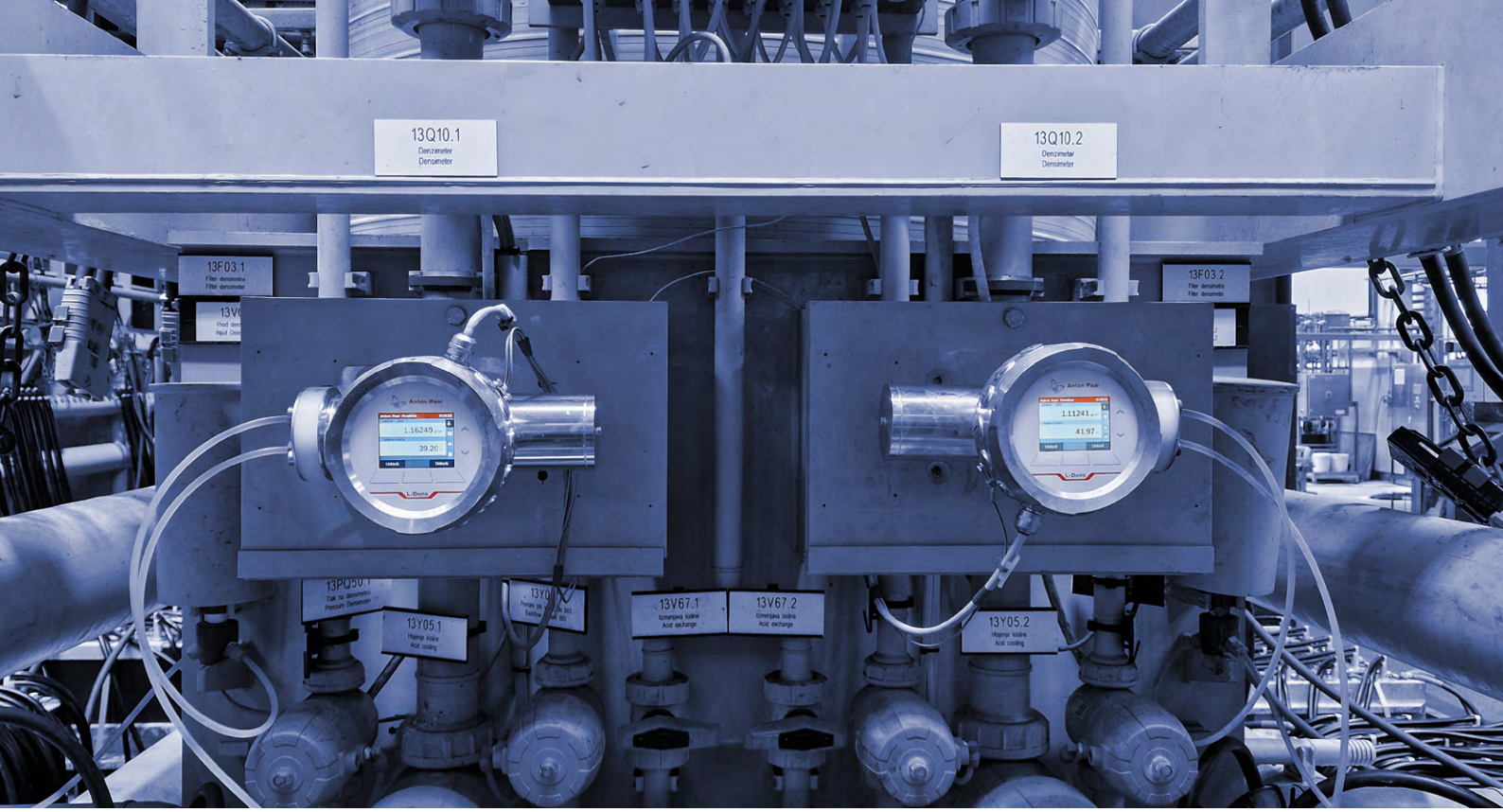
Anton Paar

TAB Ensures **Battery Quality** with Anton Paar Sensors

Battery Industry



→ Anton Paar L-Dens 7400 sensors installed at TAB in Slovenia.

TAB tovarna akumulatorskih baterij d.d., European battery producer, upgraded its electrolyte density measurement with Anton Paar's L-Dens 7400, and achieved a new level of process control and production output.

TAB is one of the world's leading manufacturers of lead-acid batteries, with more than 60 years of experience. Precision and consistency are essential for the company. They produce both industrial and starter batteries across their facilities in Slovenia and North Macedonia, while also expanding into lithium-ion technology. As part of this evolution, TAB sought an optimized solution for electrolyte density measurement, which is critical for ensuring battery performance and customer satisfaction.

Rok Korošec, technology manager for industrial batteries and head of R&D, explained the stakes: "During the formation process, maintaining accurate electrolyte density is crucial, because it impacts later battery performance and lifetime. Even small deviations lead to production delays, manual corrections, and potential customer complaints."

Previously, TAB relied on sensors that frequently clogged and delivered drifting readings. These interruptions resulted in prolonged formation cycles, higher labor costs, and increased risk of non-compliant products. "In a plant producing over 1.5 million cells, even a 2 % error rate is too much," Rok noted.

The turning point came with the implementation of Anton Paar's **L-Dens 7400 inline density meter,** integrated into TAB's closed-loop formation system. The wider-bore design eliminated the clogging issues of previous sensors and enabled precise, uninterrupted density monitoring throughout the two-day formation cycle. "It's now a fully automated system that requires only monthly cleaning. Our team can focus on quality control – not maintenance."

→ Closed-loop formation at TAB.

The improvement has been transformative. TAB now benefits from tighter process control, fewer delays, and consistently high product quality. In addition, the company can better plan its production schedules, avoid unnecessary downtime, and meet customer demand with greater confidence.

“Since installing the first L-Dens 7400 sensor over a year ago, we've seen virtually no deviation from target values. It just works – and that’s the best outcome for any production tool,” said Rok. “We’re gradually rolling it out across all plants.”

Looking ahead, Rok sees precision instrumentation – such as that from Anton Paar – as key to TAB’s competitive advantage. “Without high-precision tools, we wouldn’t be able to compete. This investment supports both our current quality standards and our future innovation goals.”

When asked how he would recommend the sensors to others, Rok summed it up simply: “This is the Ferrari of density meters. If quality matters to you, this is what you want.”

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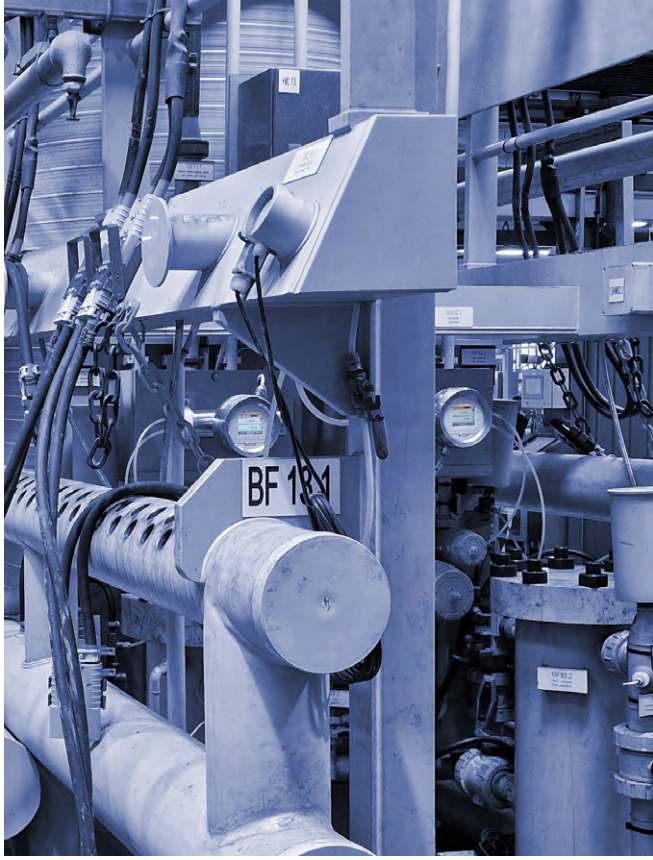
Rok Korošec, Technology Manager for Industrial Batteries and Head of R&D

→ TAB production (industrial and starter batteries).



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www.anton-paar.com/apcss-ldens-7400

Instruments: L-Dens 7400

Measured parameters: density, concentration

Samples: sulfuric acid (1.10 kg/L to 1.45 kg/L)