

What is quality-oriented production planning in Assembly of battery modules?

A tool for quality-oriented production planning in assembly of battery modules was developed by , defining critical product and process characteristics and deriving appropriate quality assurance systems using a measurement equipment catalogue.

What is Quality Management in lithium ion battery production?

Quality management for complex process chains Due to the complexity of the production chain for lithium-ion battery production, classical tools of quality management in production, such as statistical process control (SPC), process capability indices and design of experiments (DoE) soon reach their limits of applicability .

Why is battery quality so important?

Poor battery quality can lead to major safety and reliability issues in the field in applications including consumer electronics [1,2], electric vehicles [3,4], aviation , and more. However, detecting latent cell defects --which are responsible for these battery quality issues--during production is notoriously challenging.

Is high-throughput CT scanning a good solution for battery QC?

While no single method offers a perfect solution, we believe high-throughput CT scanning stands out as an especially promising and impactful technique for battery QC. Glimpse is a Boston-based startup pioneering high-throughput CT scanning for battery quality control by solving CT scanning's two major bottlenecks: scan time and analysis time.

What are the pros and cons of battery QC?

This technique is often combined with digital photography. While dissection is a standard procedure in battery QC, this method is (obviously) destructive as well as quite labor-intensive and slow. Pros: High-resolution, detailed views into internal cell structures. Cons: Destructive, labor-intensive, and slow (~hours).

Are quality management tools limiting the production chain of lithium-ion cells?

It has been shown that current quality management tools easily face their limits when applied to the production chain of lithium-ion cells due to its complexity and the need for real time processing of collected data.



Quality assurance battery cabinet
production

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