

Press Release

BST presents solutions for increasing efficiency in battery production

Bielefeld, April 6, 2023. In battery production, the highest precision is essential. Even the small imperfections in the coating or deviations in component positioning result in unacceptable quality losses and, as a result, rejects. BST's intelligently networked, user-friendly solutions increase quality in web-processing operations while reducing costs, offering a clear decisive competitive advantage. They achieve this by not only indicating and preventing quality defects, but also preventing them from occurring by correcting misguided production processes.

FRAMEGuide Pro: Space wonder for high-precision applications

The ultra-precise web guiding system FRAMEGuide Pro, with its newly developed high-performance drive with repeatabilities of $\pm 10 \mu\text{m}$, ensures highly accurate guiding results in every application. The compact FRAMEGuide Pro may be optimally and flexibly integrated into all machine layouts due to its lowest possible overall height, with fixed and moving frames located at the same level. The optional motorized sensor adjustment offers additional flexibility and ensures maximum efficiency in web guiding.

iPQ-Surface^{ENERGY}: Combination of inspection and geometrical measurement tasks in one system

The high-end surface inspection and measurement system for battery cell production, BST iPQ-Surface^{ENERGY}, ensures that only defect-free coatings, e.g. from the coating process, are further processed. The system consists of high-resolution cameras, multiplex lighting, and a software architecture with numerous interfaces for easy integration into Industry 4.0 environments. Additional features include AI-based defect classification and seamless documentation of quality, as well as clear display of all measurement results and defects.

BST application solutions: High-precision measurement plus intelligent control technology

BST COATINGControl[®] is another innovative solution for automatic optimization of coating positioning in web running processes while requiring the least amount of space. In the slitting production process, BST SLITTINGControl[®] measures the cut edges inline in relation to the coating edge of the top and bottom side. High-resolution line scan cameras, or CIS technology, are also used in conjunction with the iPQ-Surface^{ENERGY}. In both solutions, closed-loop control with upstream web guiding ensures that any deviations that occur are automatically corrected before they become quality problems.

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BST CELLInspection: Precise and reliable inline geometry measurement

BST CELLInspection precisely measures the electrodes and coating positions to the cutting edge inline in the Separating production process. In the Assembly production process, e.g. in the laminating or Z-fold manufacturing process, all relevant edges of the individual layers of the monocoil are measured simultaneously through all four layers and feedback is automatically given to the web process. The position of the four layers of a monocoil in relation to each other represents a key quality criterion.

"One of the highlights of all BST solutions is undoubtedly the high level of integration of our products into the production machines, supported by open interfaces and intuitive user interfaces," explains Klaus Hamacher, Director New Business Development at BST. The company looks not just at the individual process, but also at the big picture. With this broad perspective, it creates overall solutions that generate greater added value for the customer than detailed applications.

About BST

BST GmbH, a company of the elexis group of companies, is one of the leading suppliers of quality assurance systems for web processing industries. The company is based in Bielefeld and offers solutions for web guiding, surface inspection, web monitoring, 100% inspection, color measurement, color management, register control and automation. In these areas, the company has decades of practical know-how with installations at more than 15,000 customers worldwide in the printing and packaging, paper and film, rubber and tire, battery, and fuel cell, and printed and organic electronics industries. BST stands for high quality monitoring, smooth production processes and first-class service worldwide.

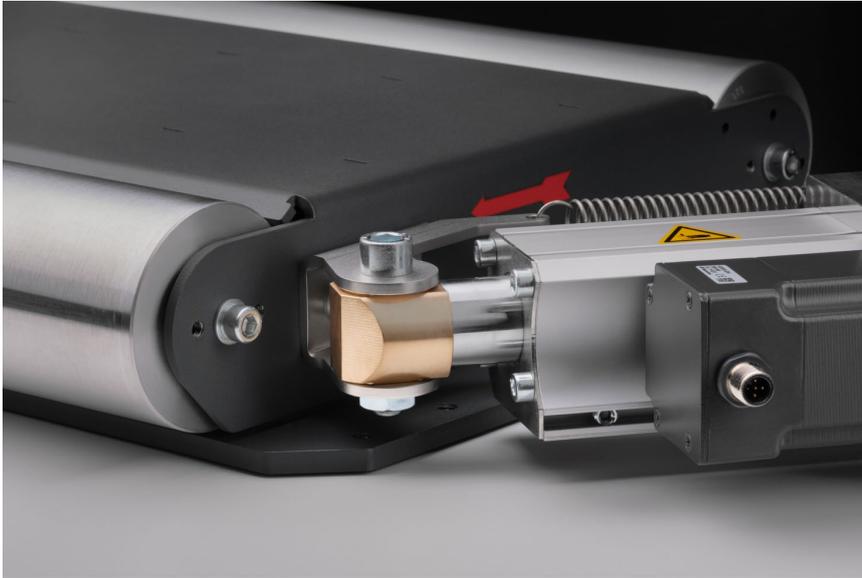
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Images and captions:



BST solutions enable battery manufacturers to meet the highest quality requirements in an economical way. With its newly developed, high-performance drive with repeat accuracies of 10 m, the ultra-precise web guiding system, FRAMEGuide Pro, ensures high-precision guiding results in every application.



Even small imperfections in battery manufacturing result in rejects. BST COATINGControl® provides a decisive competitive advantage by enhancing plant efficiency: To achieve flawless coating geometry on front and back, the system employs high-precision measurement and control technology.

Images: BST GmbH

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