
BST
an eLEXIS company
Welcome!
NAATBatt
INTERNATIONAL
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Director New Business Development North America
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FORYOU

Inline Quality Assurance

Our Products & Solutions for the Battery Industry

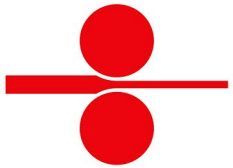
Inline Quality Assurance

SMARTData

Added value by multiple connectivity
Position-accurate traceability of quality characteristic and process parameter in the cell production

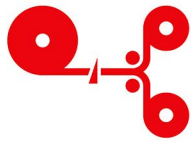
Coating

- Web Guiding
- COATINGControl®
- iPQ-Surface ENERGY
- Heavy Edges Inspection



Calendering

- Web Guiding
- iPQ-Surface ENERGY

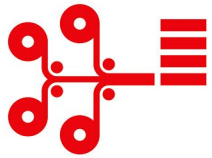


Slitting

- Web Guiding
- SLITTINGControl®
- iPQ-Surface ENERGY
- Burr Inspection*

Separating

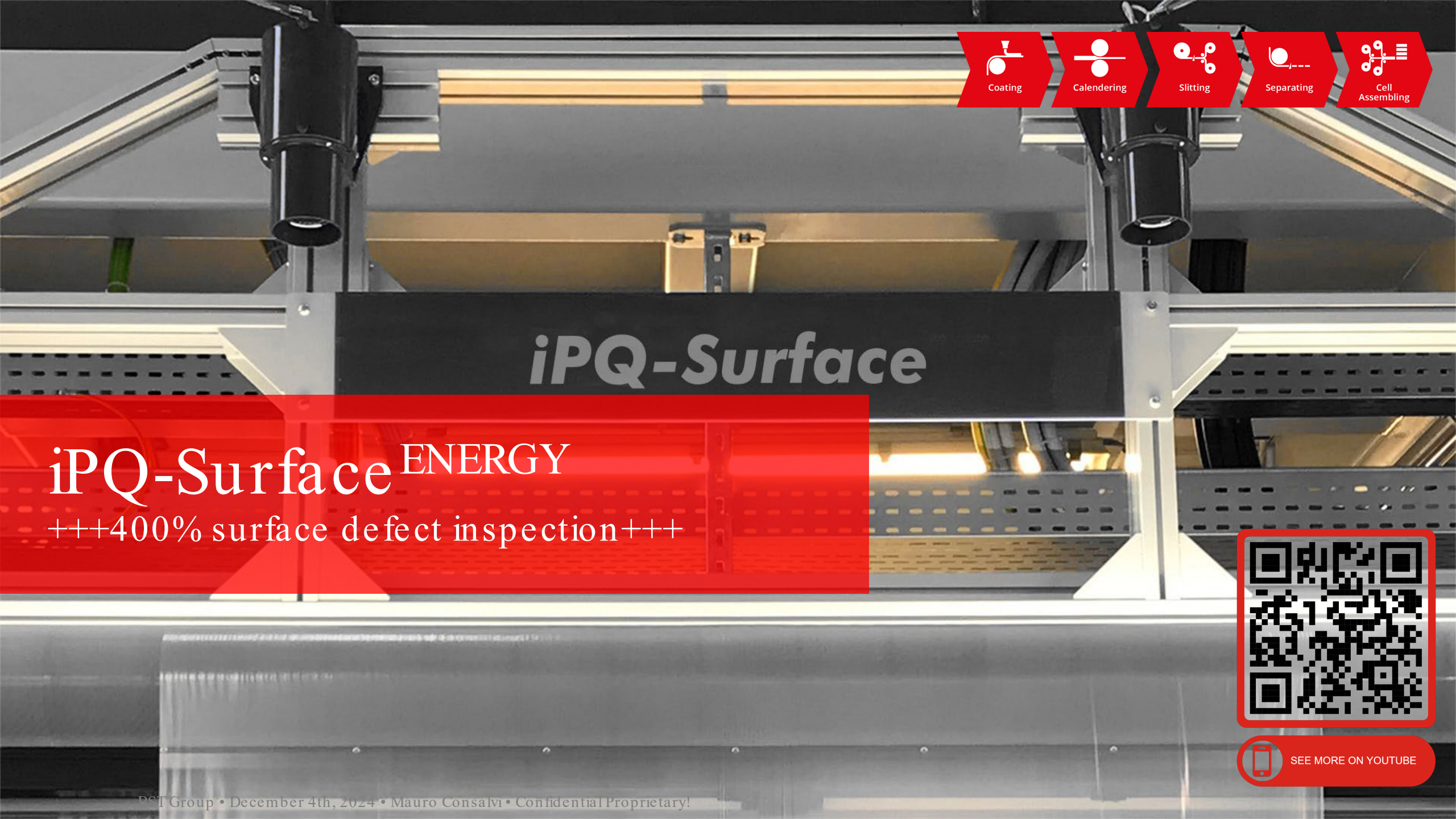
- Web Guiding
- SEPARATING Control (Cell Inspection)
- iPQ-Surface ENERGY



Cell Assembly

- Web Guiding
- ASSEMBLY Control (Cell Inspection)
- iPQ-Surface ENERGY

*) under research



Coating | Calendering | Slitting | Separating | Cell Assembling

iPQ-Surface ENERGY

+++400% surface defect inspection+++

SEE MORE ON YOUTUBE

iPQ-Surface ENERGY

Quick introduction

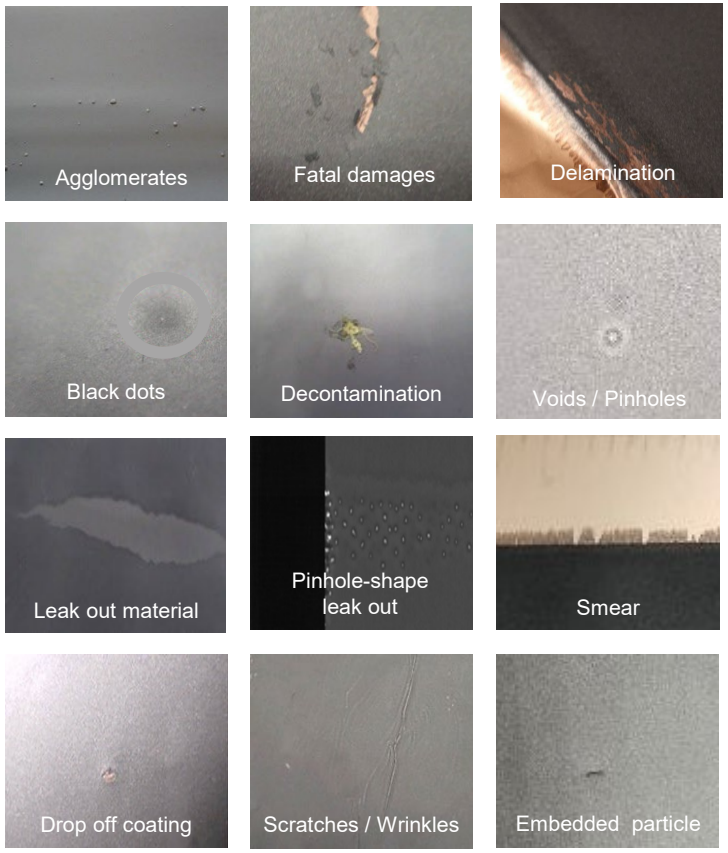
All defects in view thanks to multiplex illumination:

400% thorough – with AI support.

- **BST iPQ-Surface ENERGY** can reliably **detect and classify all typical defects** in the Lithium-Ion battery electrode production processes. This **allows proactive error prevention.**
- Our high-speed camera, combined with four simultaneous lighting modes for one camera line (**multiplex illumination**), ensures 400% that you will not miss a single thing.
- To ensure particularly efficient and above all scalable defect detection and classification, AI is an integral component of **BST iPQ-Surface ENERGY.**

Your benefit:
By partnering with the surface inspection system as a user, you can teach the system defect classes. These are then automatically assigned more and more precisely on an ongoing basis.

Typical defects:



COATINGControl®

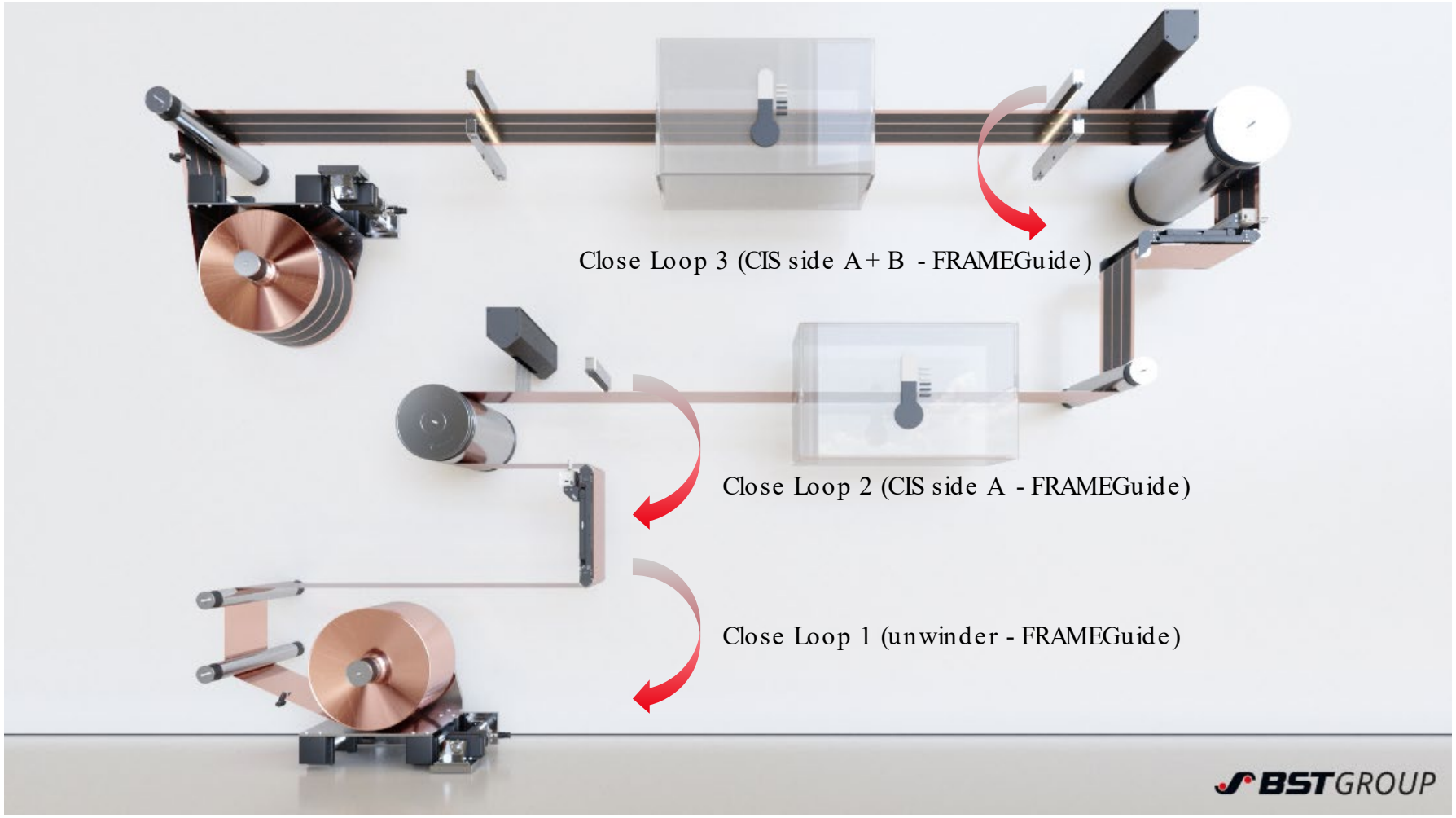
+++closed-loop coating position control+++

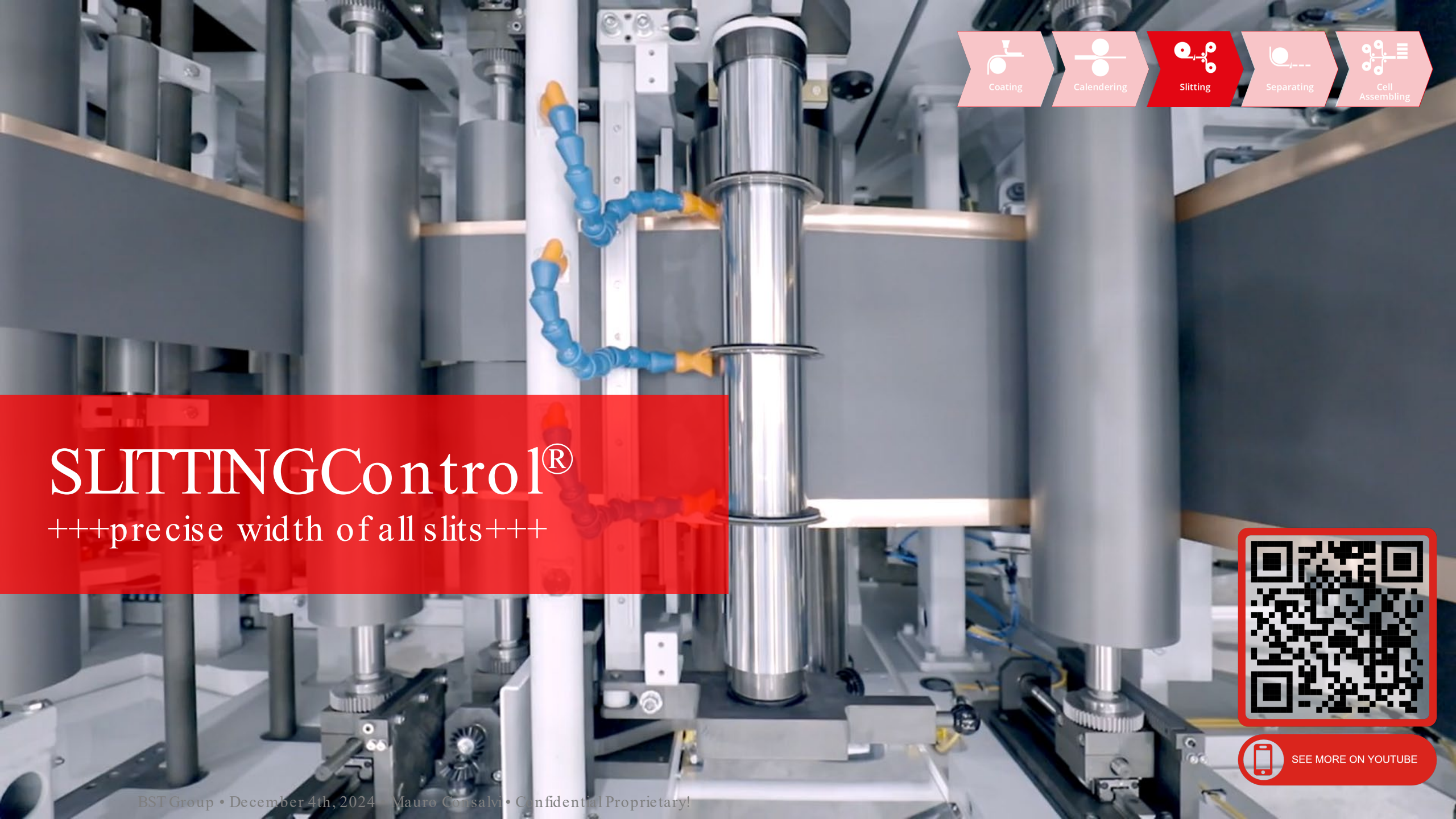
SEE MORE ON YOUTUBE

COATINGControl®

Overview

Coating | Calendering | Slitting | Separating | Cell Assembling





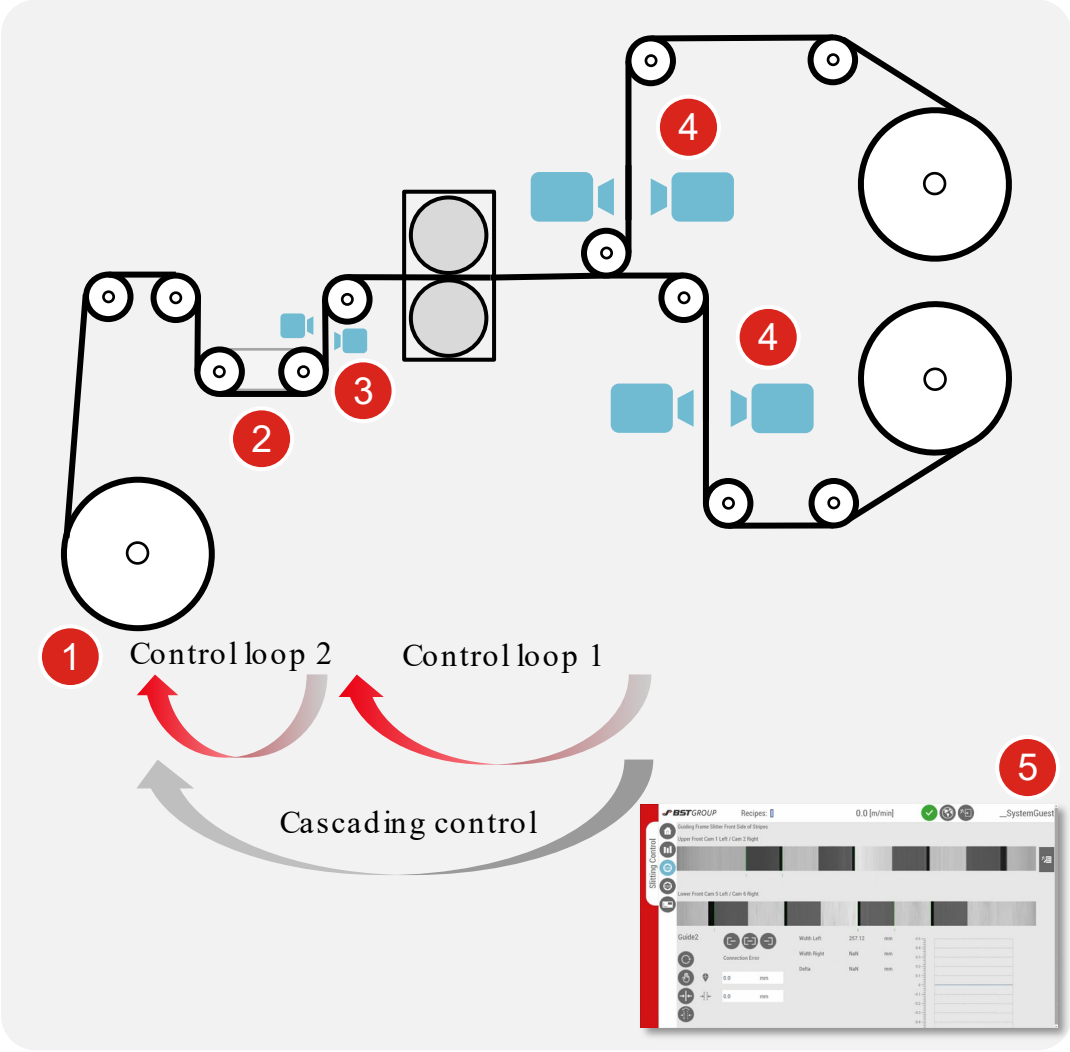
SLITTINGControl®

+++precise width of all slits+++

SEE MORE ON YOUTUBE

SLITTINGControl®

Position and key description of components



1 Un-winder control

- IR edge sensor with Resolution / Repeatable accuracy* 0,001 mm / 0,01 mm
- Linearity ± 0,2 mm

2 FRAMEGuide HP

- High precision web guiding frame
- Backlash free, Brushless motor, Lowest footprint, STO function

3 CLS Pro 600

- High resolution line scan camera (resolution 0.005 mm)
- Robust coating edge detection (smart image processing control)
- Controlled LED lighting integrated

4 Lane Inspection

- Line chip cameras (CCD CAM 100)
- CIS (Contact Image Sensor)
- iPQ-Surface ENERGY

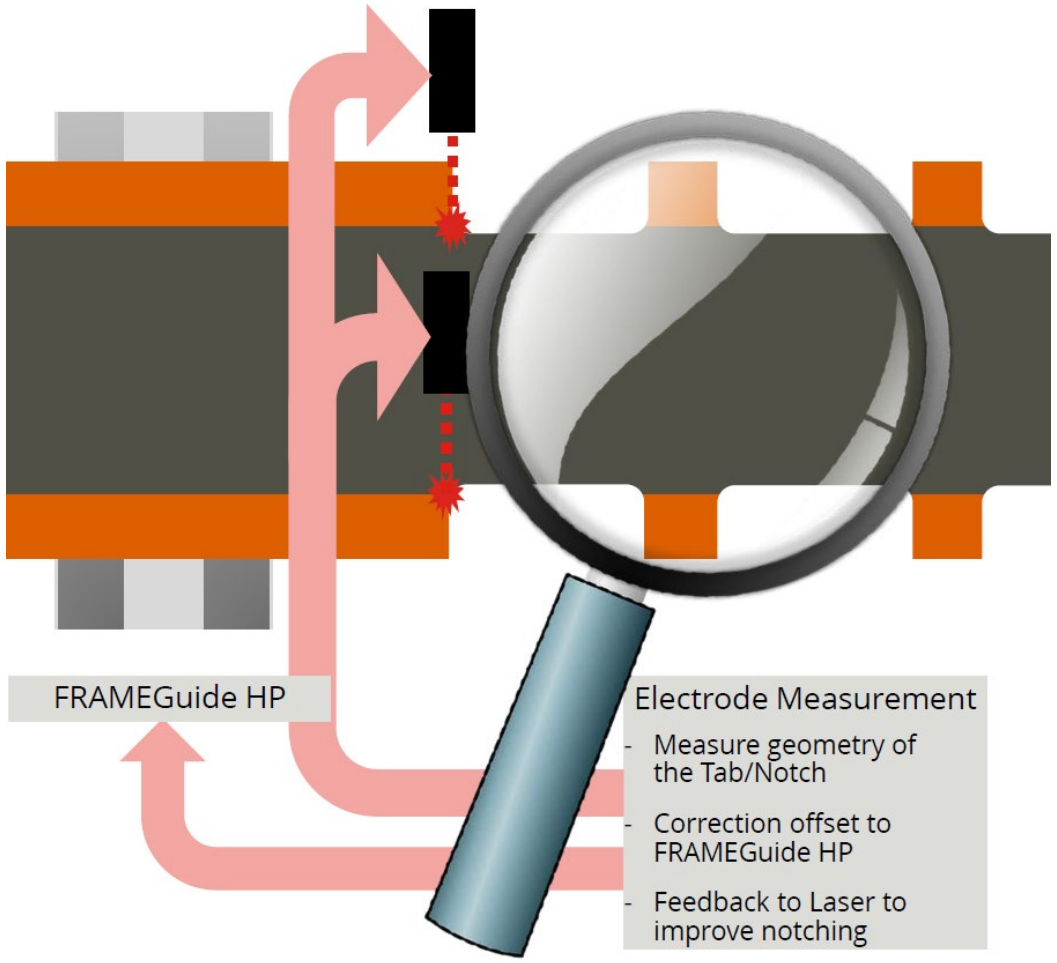
5 Functions

- PC based close loop control
- HMI, full width 100% live sensor image and trend visualization
- Data and machine interfaces

CELLInspection

CELLInspection

Application example notching control



CROSS PROCESS WEB-POSITION-ACCURATE QUALITY DATA MAPPING

SMARTData

SMARTData

Position-accurate traceability of quality characteristic and process parameter in the battery cell production

Manufacture-independent
process and quality data synchronization

Open interfaces
for sensors, QA systems or individual production machines

Cell position accurate data
available within each individual production process

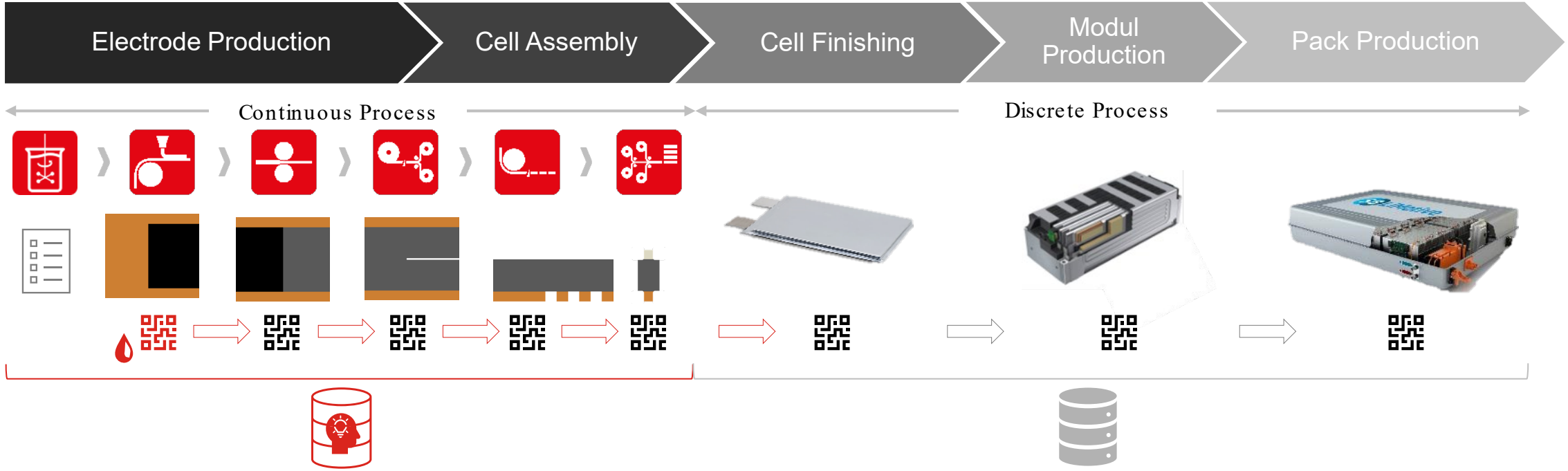
Bidirectional data exchange
across production processes

Central data storage
for all linked data of multiple process steps

Interfacing
to upstream and downstream production processes and ERP / MES systems

Position Accurate Traceability Across All Stages

Differentiation between continuous and discrete process



Continuous position-accurate data documentation of the entire value chain

- independent of variations of supplier, systems, data source and its interfaces
- using all quality and process data sources of the continuous production process
- interfacing to established downstream and upstream discrete production processes

Thank you! Let's talk!

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