SCANTECH®

ONLINE MEASUREMENT
AND CONTROL

LI-ION BATTERY INDUSTRY

MEASUREMENT & QUALITY-CONTROL SOLUTION

ALUMINUM & COPPER FOIL

ANODE & CATHODE COATING

CALENDER

SLITTER

BATTERY SEPARATOR FILM

www.scantech.com

FRANCE
HEADQUARTERS

Founded in 1992, SCANTECH was first to introduce low-energy X-ray transmission technology for the measurement of lightweight materials. Today, over 1,000 scanners are installed annually around the world for many types of production lines, including all types of extruded films, non-woven fibers, lamination and coatings processes, and metals.

SCANTECH continues to lead the world-wide market for X-ray, laser, infrared, and microwave online measurement and control systems, as well as visual inspection tools thanks to our focus on innovation. We are dedicated to expanding and perfecting our offer to include groundbreaking technology, incorporating laser triangulation, ergonomic UI, and automatic calibration.

SCANTECH is headquartered in France, with fully-owned subsidiaries in China (Guangzhou), the USA, Germany, Italy, South Korea, India, Malaysia, and Taiwan. All core components, such as sensors and electronic circuit boards, are designed in France and the entire production process is supervised by French professional and technical personnel.

To ensure product quality and customer satisfaction, each subsidiary provides comprehensive customer support, and installation and maintenance services locally. With multiple assembly centers around the world, SCANTECH can supply the same high-quality products to domestic customers, and provide timely service and a complete stock of spare parts.

Each center is in full accordance with the quality standards of SCANTECH's production plant in France.

ON-LINE PRODUCTION MEASUREMENT SYSTEM

ENERGY

EXTRUSION

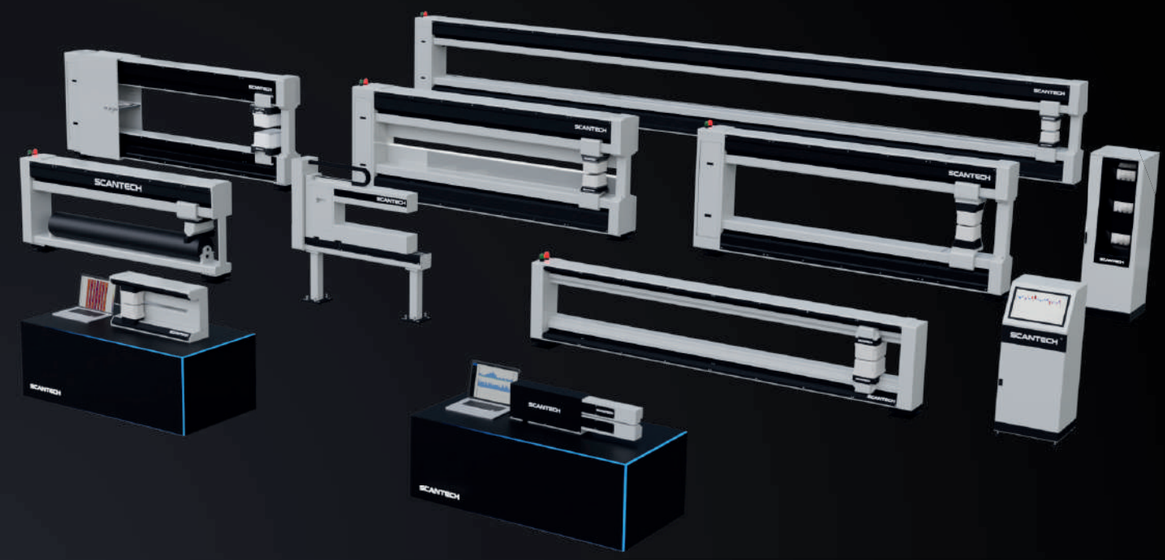
METAL

PAPER

LAMINATION AND CONVERTING

TEXTILE AND NON-WOVEN

WIDE RANGE OF FRAMES & CONSOLES

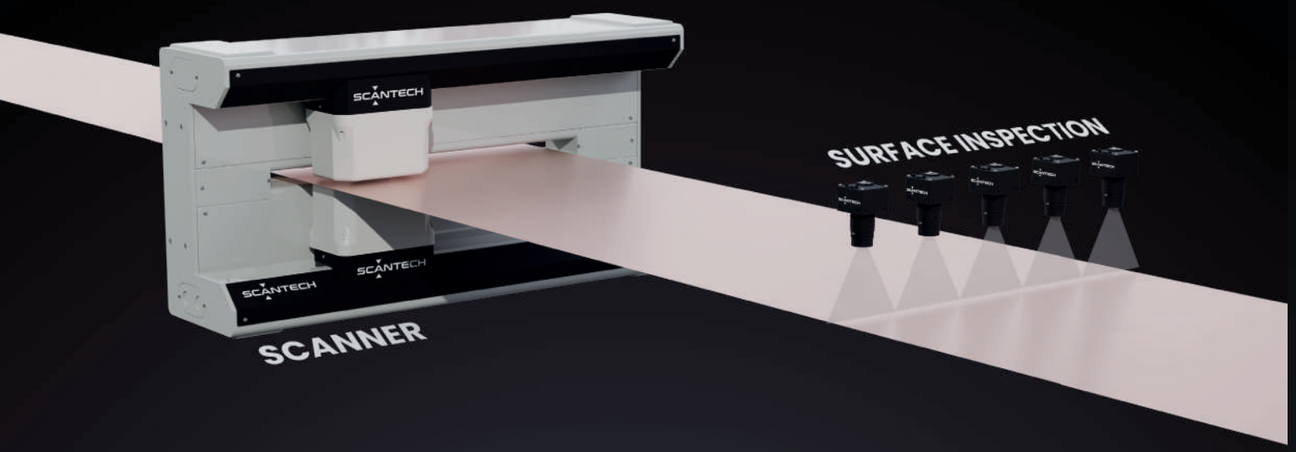


SCANTECH®

ONLINE MEASUREMENT
AND CONTROL

MEASUREMENT SOLUTION FOR

ALUMINUM & COPPER FOIL



MEASUREMENT SYSTEM

1 SCANNER

1 CAMERA STATION Surface inspection system

HMIs

- 1 supervision station with the FLEXSCAN interface
- OPC-UA connection with the SCANTECH network

LOCATION

- On the slitter line for copper foil
- On the lamination line for aluminum foil

FEATURES

RECOMMENDED SCANNER

SCANNER

Type: Micro OF3

Width: from 500 to 2000mm

MEASUREMENT

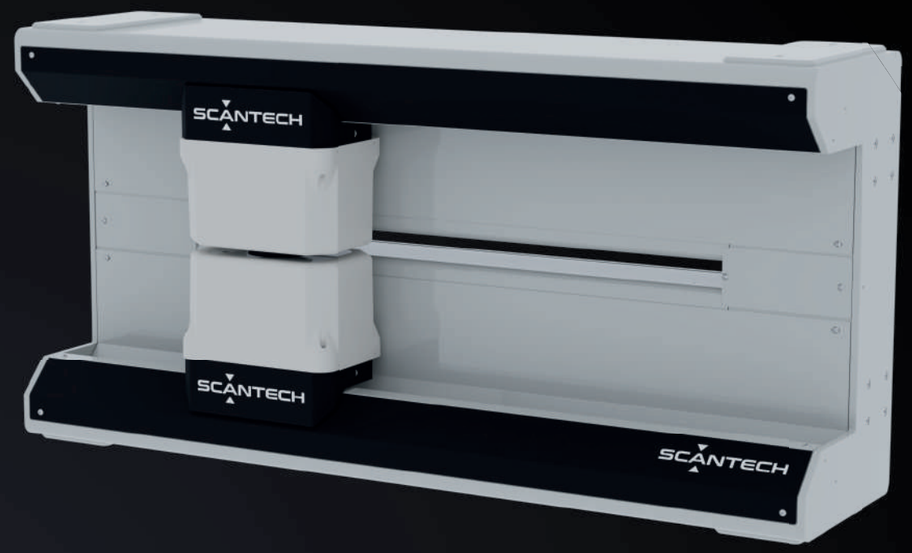
THICKNESS MEASUREMENT

- Range: 1 to 100µm
- Technology: low-energy x-ray transmission sensor
- Accuracy: Better than 0.1%

VISUAL INSPECTION

SURFACE INSPECTION

- CD restitution: <100µm
- MD restitution: <100µm
- Defect classification



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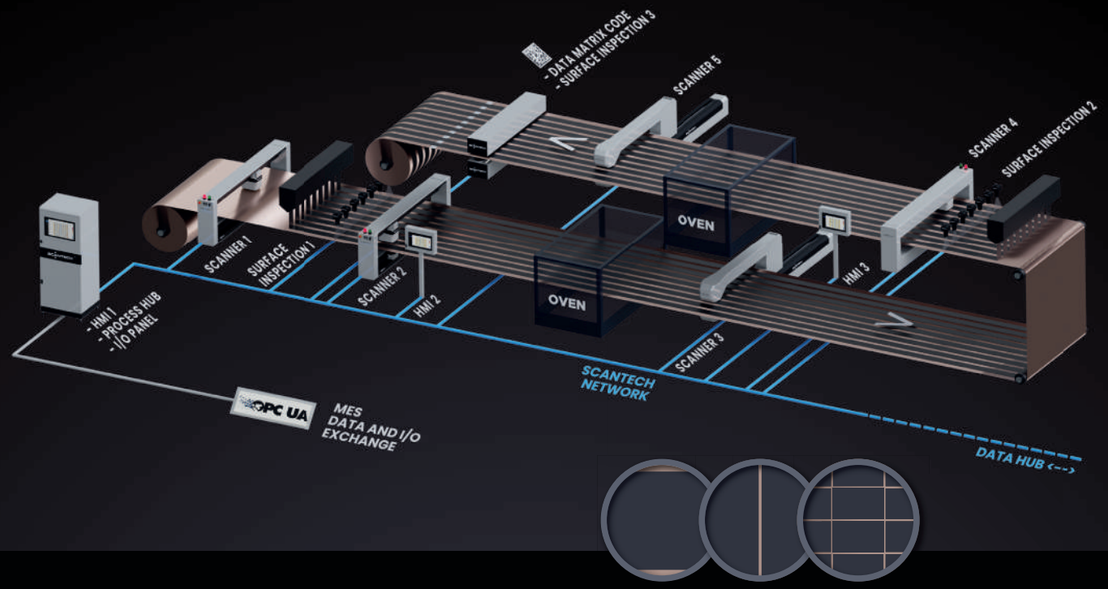
SCANTECH®

ONLINE MEASUREMENT
AND CONTROL

MEASUREMENT AND QUALITY-CONTROL SOLUTION

ANODE & CATHODE COATING LINES



MEASUREMENT SYSTEM

5 SCANNERS USING OUR ADVANCED SAMESPOT TECHNOLOGY

- Scanner 1 for the foil substrate
- Scanner 2 and 4 for each wet coating section
- Scanner 3 and 5 for each dry coating section

3 CAMERA STATIONS

- Surface inspection systems 1 and 2 for each wet coating section
- Surface inspection system 3 before the winder

HMIs

3 SUPERVISION STATIONS WITH THE FLEXSCAN INTERFACE

- 2 HMIs dedicated to the coating stations
- 1 full-line HMI inside the control room
- OPC-UA connection with the SCANTECH network

FEATURES

RECOMMENDED SCANNERS

SCANNERS: 1, 2 & 4

- Type: LV3 O-Frame
- Typically 800mm for cathodes and 1400mm for anodes

SCANNERS: 3 & 5

- Type : LV3 O-Frame if thickness is required
  HC3 C-Frame if thickness is not required

MEASUREMENTS

FOIL BASIS WEIGHT MEASUREMENT

- Range: 1 to 100µm
- Technology: low-energy x-ray transmission sensor
- Accuracy: Better than 0.1%

WET OR DRY BASIS WEIGHT MEASUREMENT

- Range: 1 to 500g/m2
- Technology: auto-calibration x-ray sensor
- Edge detection resolution: ≈ 0.5mm
- Accuracy: Better than 0.1%
- Absolute weight measurement without calibration: better than 1%
- “Bunny ears” profile visualization

OPTIONAL DRY THICKNESS MEASUREMENT

- Range: 1 to 500µm
- Technology: confocal sensor
- Accuracy: Better than 1µm

OPTIONAL DRY DENSITY MEASUREMENT

- Technology: confocal sensor
- Accuracy: Better than 1%

VISUAL INSPECTION

DEFECT DETECTION

- CD restitution: <100µm
- MD restitution: <100µm
- Defect classification

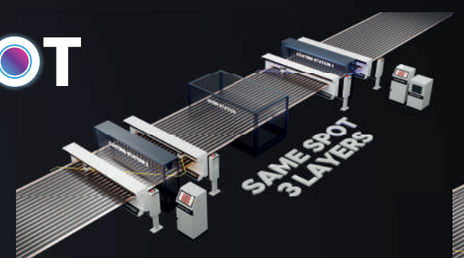
GEOMETRY MEASUREMENT

- Geometric figure control, including double-sided overlapping patterns and ceramic coating
- Patterns and stripes
- Accuracy: Better than 0.1µm

TRACEABILITY

Data Matrix Code (DMC) interpretation

ADVANCED
SAMESPOT

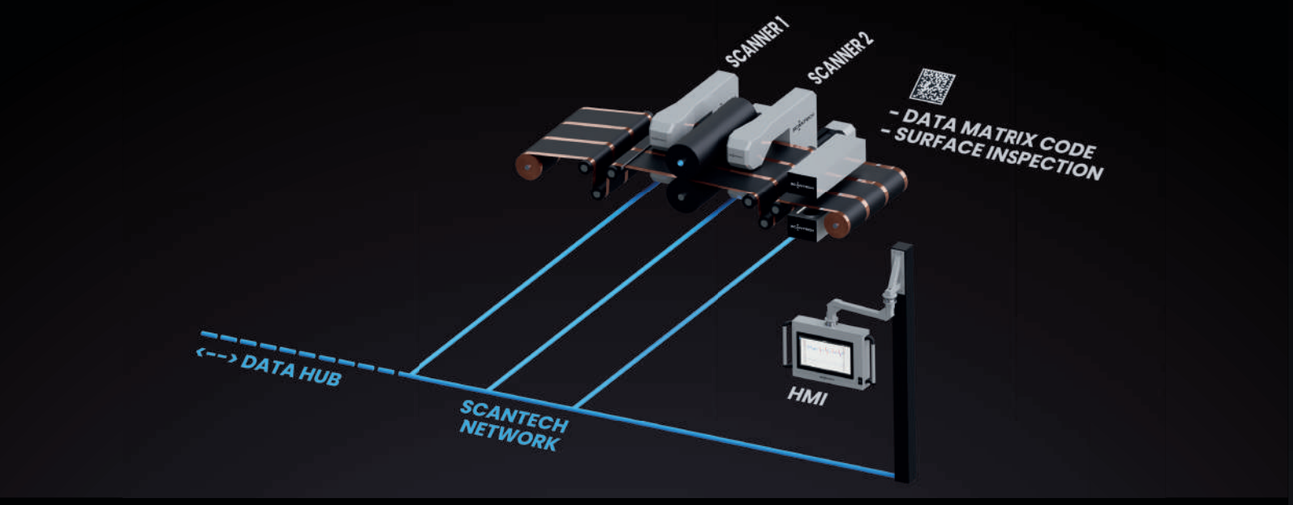


SCANTECH®

ONLINE MEASUREMENT
AND CONTROL

MEASUREMENT SOLUTION FOR

ANODE & CATHODE CALENDERING LINES



MEASUREMENT SYSTEM

2 SCANNERS

- Scanner 1 measures the thickness before the calender
- Scanner 2 measures the thickness and the density after the calender

VISUAL INSPECTION SYSTEM

1 CAMERA STATION

- Surface inspection system after the calender

HMIs

1 SUPERVISION STATION WITH THE FLEXSCAN INTERFACE

- 1 HMI next to the calender station
- OPC-UA connection with the SCANTECH network

FEATURES

RECOMMENDED SCANNERS

SCANNERS 1 & 2

Type: HC3 C-Frame — Before and after the calender

MEASUREMENTS

THICKNESS MEASUREMENT BEFORE THE CALENDER

- Range: 1 to 500µm
- Technology: confocal sensor
- Accuracy: Better than 1µm

BASIS WEIGHT MEASUREMENT AFTER THE CALENDER

- Range: 1 to 500g/m2
- Technology: auto-calibration weight measurement sensor
- Accuracy: Better than 0.1%

DENSITY MEASUREMENT

Obtained using the ratio of the basis weight and the thickness

VISUAL INSPECTION

DEFECT DETECTION

- CD restitution: <100µm
- MD restitution: <100µm
- Defect classification

GEOMETRY MEASUREMENT

- Geometric figure control, including double-sided overlapping patterns and ceramic coating
- Patterns and stripes
- Accuracy: Better than 0.1µm

TRACEABILITY

- Data Matrix Code (DMC) interpretation

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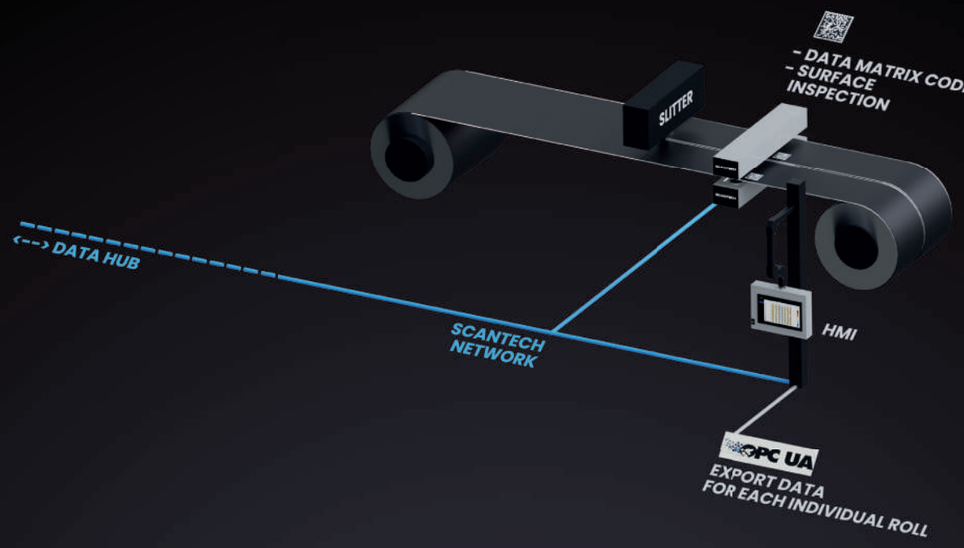
SCANTECH®

ONLINE MEASUREMENT
AND CONTROL

FEATURE SYSTEM FOR

SLITTER
ANODE & CATHODE LINES



VISUAL INSPECTION SYSTEM

1 CAMERA STATION

- Surface inspection system after the slitter

HMI

1 SUPERVISION STATION WITH THE FLEXSCAN INTERFACE

- 1 HMI next to the slitter station
- OPC-UA connection with the SCANTECH network

FEATURES

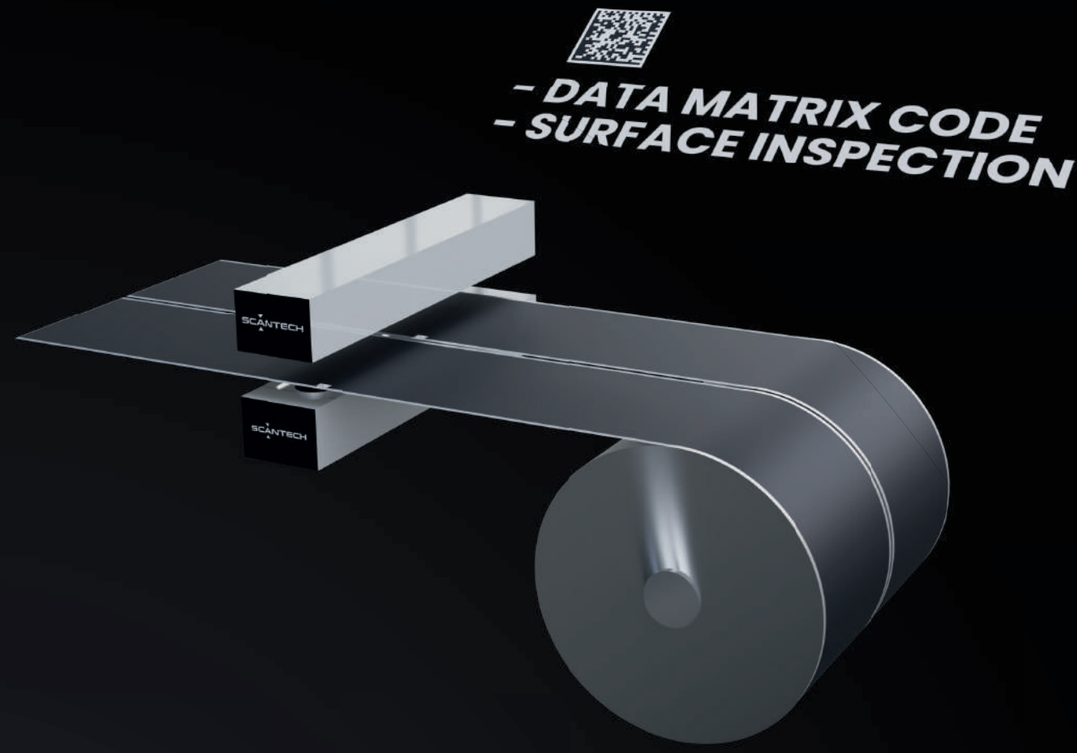
VISUAL INSPECTION

DEFECT DETECTION

- Defect classification

TRACEABILITY

- Data Matrix Code (DMC) interpretation



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ONLINE MEASUREMENT
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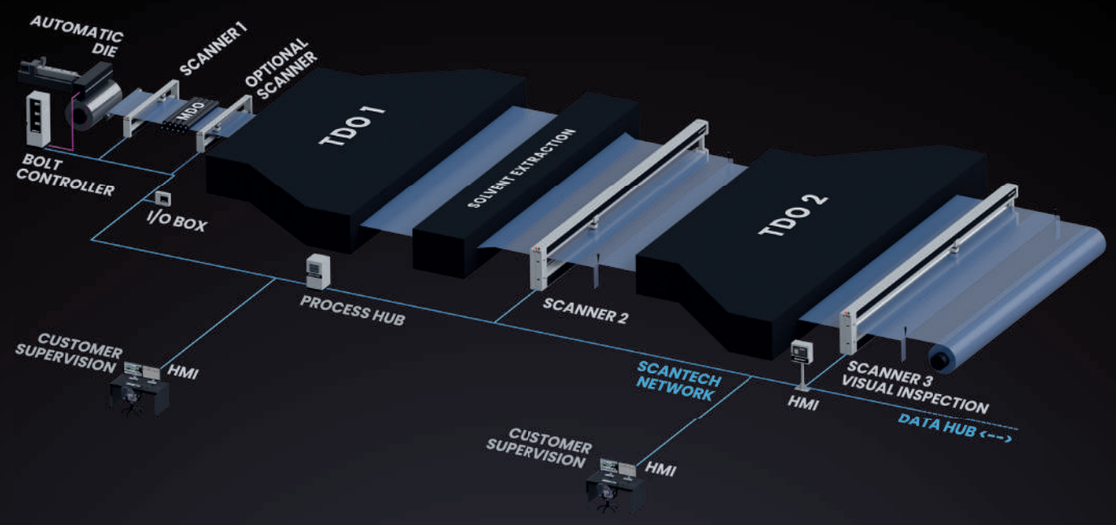
MEASUREMENT SOLUTION FOR

BATTERY SEPARATOR FILM

CONTROL | VISUAL INSPECTION



CONTROL

AUTO MAPPING
APC - Auto Profile Control

TDO STRETCH PROFILE

MELT FLOW MODEL

CASCADE CONTROL

BOLT CONTROLLER
Power & Temperature
Control up to 360 bolts

MACHINE DIRECTION CONTROL

BIAX SCANNERS

Powerhouse performance

FROM 500 mm TO 15000 mm

FEATURES

True Thickness

TDO Stretch Profile

Edge Profile

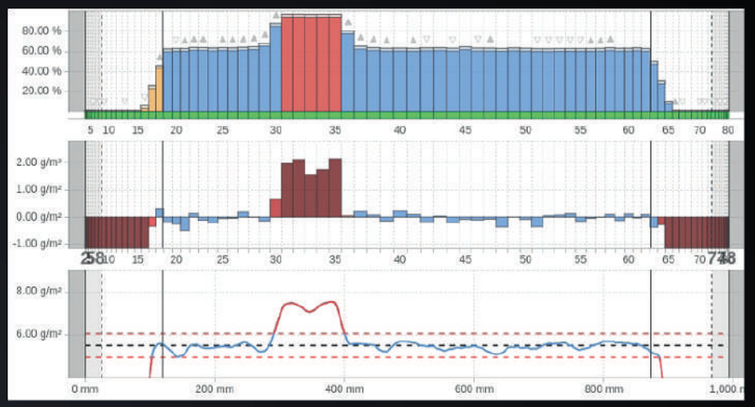
Defect Detection

Filler: $CaCo_3$ | TiO_2 | $BaSo_4$

FX FLEXSCAN

INDUSTRY 4.0 OPC UA

Bolt representation and automatic die control.



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SCANTECH®

A WORLDWIDE GROUP

FRANCE - HEADQUARTERS

Scantech S.A.S
Bâtiment Andromede
108 Avenue du Lac Léman
Savoie Technolac
73290 La Motte Servolex
France
+33 (0)4 79 25 05 25

GERMANY - SUBSIDIARY

Scantech Germany GMBH
Rennweg 60
D - 56626 Andernach
Germany
+49 2632 / 95 89 470

CHINA & TAIWAN - SUBSIDIARIES

Scantech China
101/201, Building 2, No.10,
Hefeng Yi Jie,
Huangpu District,
Guangzhou,
511356 China
+86 20 3216 5036

AMERICAS - SUBSIDIARIES

Scantech S.A.S
8637 Grovemont Circle
Gaithersburg
MD 20877
USA
+1 301 990 9201

ITALY - SUBSIDIARY

Scantech Italy S.R.L
Via F. Petrarca, 35
50041 Calenzano (FI)
Italy
+39 055 4564399

INDIA - SUBSIDIARY

Scantech India
Measuring Equipments PVT LTD.
Plot NO. 021/3/1/5
Near Thermax Chowk,
Opposite to Novel International School,
MIDC Chinchwad Pune-411019,
Maharashtra
India
+91 8983007016

SOUTH KOREA - SUBSIDIARY

Scantech Korea
#1808, 6 Samseong-ro 96-gil,
Gangnam-gu,
Seoul, 06168
Korea
+82 (0)70 8842 3889

MALAYSIA & THAILAND - SUBSIDIARIES

Scantech South East Asia SDN BHD
B-G.29,
BLOCK B.
JALAN PIU IA/3J,
TAIPAN 1,
Ara Damamsra,
47301 Petaling Java,
Selangor Darul Ehsan
Malaysia
+6019 355 9395