EasyInspect & EasyMeasure

dr. schenk

Automatic Process and Quality Control for Textiles
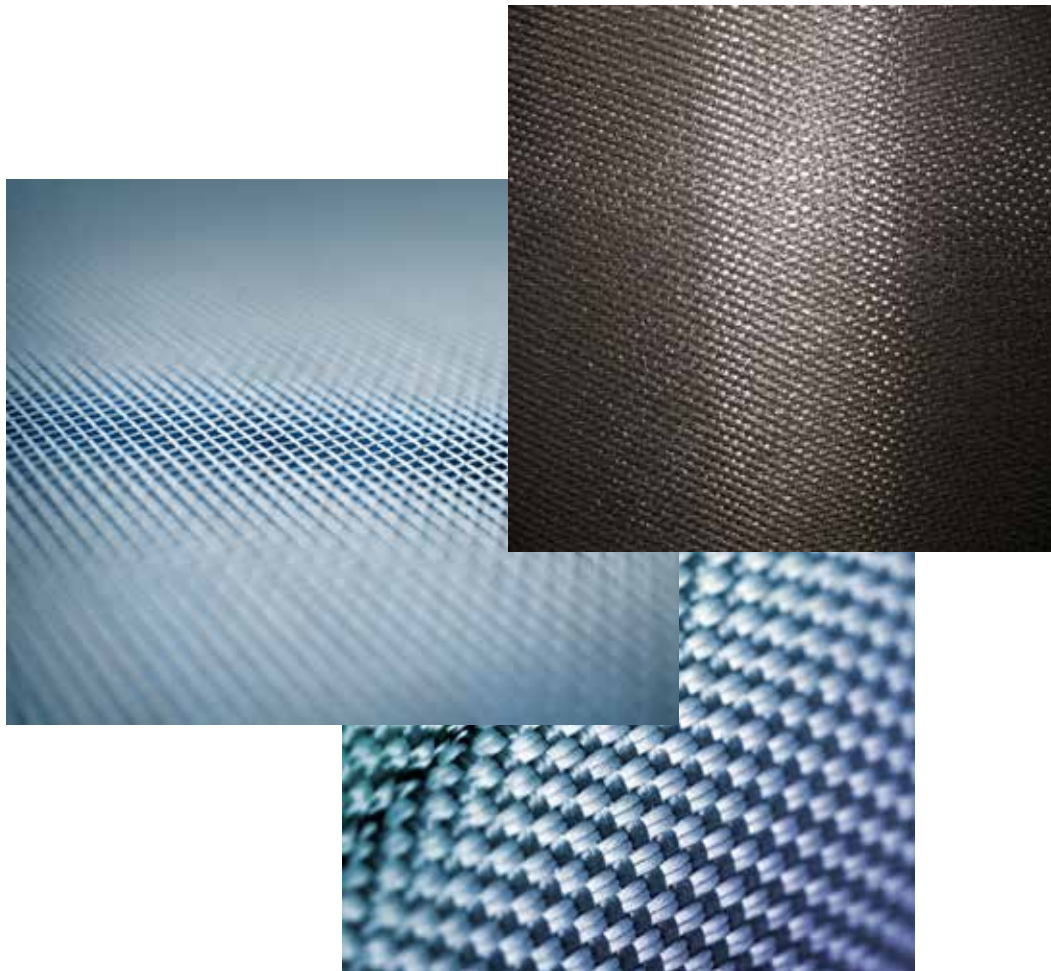
The Complete Inspection Solution

Textiles

500 µm

2 mm

5 mm

5 mm
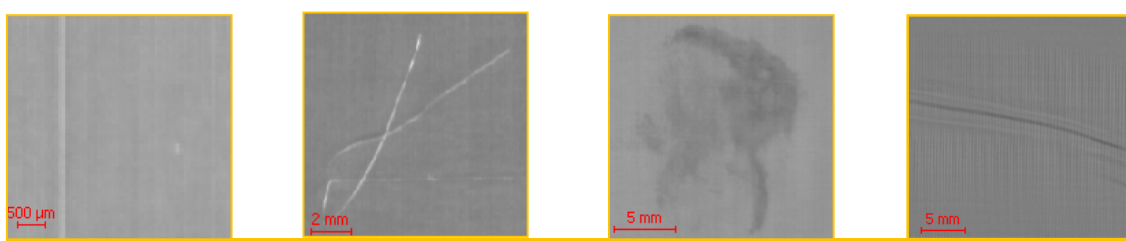
Easy*Inspect* & Easy*Measure*

YOUR BENEFITS

Cost savings with superior technology

- Reliable defect detection and classification of all deviations from the base material through Multiple Image Defect Analysis (MIDA)

- Super-fast cameras = multiple optical channels in one camera line

- Small space requirements and cost savings through multiple inspection channels in a single scan line

- Reliable streak detector, unique defect detection through Histogram evaluation

Flexible application for all textiles

- Best inspection for technical textiles (carbon and steel fabrics etc.), decorative textiles and clothing, as well as carpet

- Usable for textile creation and processing, and/or for cloth inspection

- 100% of the material base weight can be monitored for deviations, in user-defined material resolution

Simple and easy to operate

- Detailed production statistics both during and after production

- Simple adaptation to new materials onsite without programming or software knowledge

Efficiency and quality through Dr. Schenk inspection for textiles

EasyInspect - Powerful inspection of textiles with MIDA

EasyInspect uses MIDA technology to inspect textiles with multiple optical channels on a single scan line. One defect is seen from different perspectives. The defect information from the different channels is combined, ensuring the most comprehensive defect classification and material qualification. Acceptable material characteristics can be clearly distinguished from yield-relevant defects.
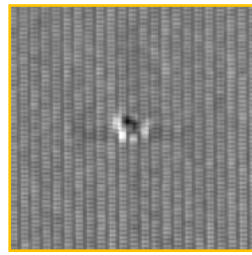
In this way, no faulty material is delivered to the customer, while no acceptable material is scrapped needlessly. Low investment costs and small line space consumption through a single scan line are further benefits of the inspection with EasyInspect and EasyMeasure.

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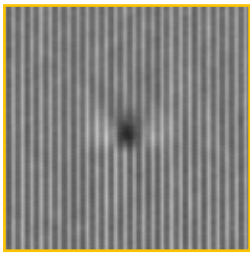
Reflection Brightfield

Reflection Darkfield

The defect images on the left show how a needle hole is displayed in two different channels on the same scan line. By having multiple perspectives through the MIDA technology, the system offers the best classification for each individual defect. In this example, the needle hole is detected reliably in both channels. However, in the Reflection Darkfield channel, the actual defect characteristic can be seen better. By merging the defect information from both channels a comprehensive defect classification is possible.

Unique defect detection through Histogram evaluation

The structured formation of textiles makes it difficult to distinguish between regular brightness variations (meshes) and variations caused by material defects (misaligned meshes, double picks etc.) Specially for this task, Dr. Schenk developed the Histogram evaluation: Based on statistic gray value distributions in user-defined areas defects can be reliably differentiated from regular material.
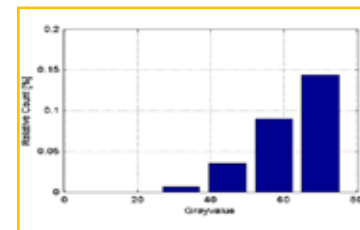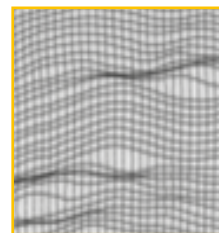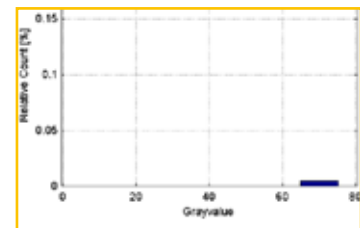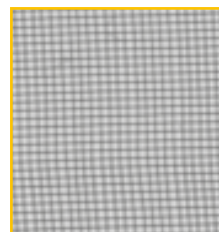
Histogram distribution for good material (top) and misaligned meshes (bottom)

Textile materials:

- Gauze
- Composites
- Fiber Roving
- Laminated/Coated fabrics
- and many more

Textile defects:

- Contaminations (oil stains, particles, foreign fibers)
- Wrinkles
- Streaks (double picks, reed or hook marks)
- Holes by fiber breaks (for example torn meshes)
- Deviations from the base structure (warps, mesh geometry, lattice image etc.)
- Faulty coating (irregular, non-adhesive or missing)
- and many more

EasyMeasure monitoring

Next to local defects, material homogeneity and e.g. coating thickness are important properties of a textile material. Dr. Schenk's EasyMeasure offers complete monitoring of these aspects for the full material width with more than 65.000 gray levels for identifying large-area defects like coating variations and other irregularities.

Dr. Schenk's production site

Dr. Schenk GmbH, established in 1985, is an innovative high-tech company based near Munich, Germany. Dr. Schenk develops, produces and markets optical inspection and measurement solutions for automated quality assurance and production process monitoring. This includes high-quality, customizable handling solutions. The systems are a key success factor in the making and converting of many materials, e.g. plastics, nonwovens, textile materials, paper, metal, or glass, or a multitude of markets like display glass, automotive, packaging, medical, renewable energy, and many more.

Throughout the world more than 300 Dr. Schenk employees continue to set new standards for inspection. Over 18,000 m² of modern, cleanroom-capable production and testing facilities are available to research, development and production to apply cutting-edge optics and electronics to customer applications.

Dr. Schenk offers extensive from-lab-to-fab knowledge. Customers benefit from the expertise in the translation of lab applications to large scale productions. Sophisticated handling solutions complete the one-stop-shopping experience.

The company's objective is complete customer satisfaction. This is achieved through innovative and practical solutions that can be implemented into new and existing production lines. Local sales and service facilities around the world ensure fast support, technical service, training and consulting at any phase of a project.

From modular standard units to highly customized systems – Dr. Schenk's solutions have your material in focus!

For more information: **www.drschenk.com**

YOUR MATERIAL IN FOCUS

Advanced Machine Vision Solutions for Quality Control

**Dr. Schenk GmbH
Industriemesstechnik**

Headquarters

Bussardstr. 2
82166 Graefelfing
Germany

Phone: +49-89-85695-0
Fax: +49-89-85695-200

www.drschenk.com/contact.html