Automatic Process & Quality Control for Nonwoven Materials

The complete inspection solution

Hole  Puff ball  Contamination  Roping
**EasyInspect & EasyMeasure**

**YOUR BENEFITS**

**Cost Savings with Superior Technology**
- Improved defect detection and classification of all nonwoven defect types through Multiple Image Defect Analysis (MIDA)
- Super-fast cameras = multiple optical channels in one camera line
- Reduced costs and installation space through Twin-Line illumination – 2 optical channels in one illumination
- Reliable streak detector for identifying water jet patterns

**100% Material Monitoring**
- Grammage monitoring: 100% of the material base weight can be monitored for user-defined material areas
- Formation monitoring: Individual local area characteristics like cloudiness and other irregularities can be detected in small and large material areas

**Unparalleled User-Friendliness**
- Automatic creation of classification rules with the Auto-Classifier
- Detailed production statistics both during and after production

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**EasyInspect - Powerful inspection for all nonwovens with MIDA**

EasyInspect uses MIDA technology to inspect nonwovens with multiple optical channels on one 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. This also means that the inspection is independent from material stretching effects that make exact defect identification difficult in other systems.

MIDA clearly distinguishes yield-relevant defects from irrelevant defects or material structure, ensuring that faulty material does not reach the customer, and good material is not 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.
Ensures Quality, Improves Your Process

The defect images on the left show how a fiber lump appears in three different optical channels, taken simultaneously at 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 clearest defect image is obtained with the Reflection Darkfield channel; this channel also shows the effects of background removal of the material structure.

EasyMeasure monitoring

Material homogeneity, grammage and formation are the most important material properties for a nonwoven material, being crucial for a low variation coefficient of the production. Dr. Schenk’s EasyMeasure offers complete monitoring of these aspects for the full material width with more than 65,000 gray levels. For this, the material can be divided into areas of user-definable size, offering a scalable material resolution ideally suited to displaying large area issues like material cloudiness and other large-scale inhomogeneities in high resolution and great detail.

Nonwoven applications:

- Hygiene
- Medical care
- Personal care
- Civil engineering
- Automotive
- Filters
- and many more...

Nonwoven technologies:

- Spunbond
- Spunlaced
- Meltblown
- Composite
- Wetlaid
- Airlaid
- Carded
- Needlepunched
- Thermal bond
- Special applications

Nonwoven defects:

- Fish eyes
- Holes
- Contaminations
- Broken filaments
- Scratches
- Streaks
- Thick / Thin spots
- Dents
- Roping
- False color fibers

- Oil stains
- Wrinkles
- Drops
- Coating defects
- and many more...

The false color display shows a more detailed image of material unevenness than the gray image. Thin areas are displayed in red, very thin areas in yellow and thick areas in blue.

Your Reliable Partner
Dr. Schenk GmbH, established in 1985, is an innovative high-tech company based near Munich, Germany. Dr. Schenk develops, produces and markets optical surface inspection and measurement solutions for automated quality assurance and production process monitoring. The systems are a key success factor in the making and converting of many materials, e.g. plastics, glass, metal, PV modules, wovens & nonwovens, and the semiconductor industry.

Throughout the world Dr. Schenk’s 220 employees continue to set new standards for the inspection of surfaces. Over 10,000 m² of modern production and testing facilities are available to research, development and production to apply cutting-edge optics and electronics to customer applications.

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 precision in focus!

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