

High-Speed In-line Inspection for Laminated Film 100% Quality and Process Control



Dr. Schenk solution for the inspection of laminated film.

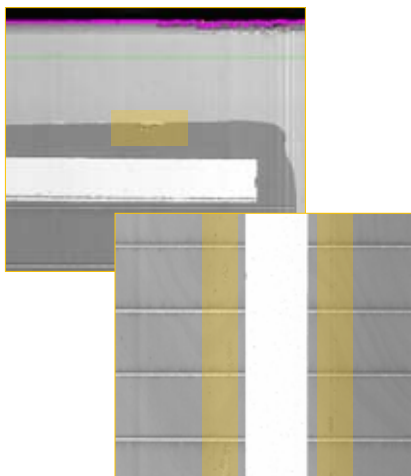
Laminated film products are used in a wide range of applications all of which demand a consistent level of quality.

Bonding substrates by heat and/or pressure requires high quality base materials to prevent loss of time and yield during the lamination process.

The Dr. Schenk inspection solutions EasyInspect and EasyMeasure ensure the quality of the base material and of the finished product. The advanced Dr. Schenk technology monitors and reports production quality, covering 100% of the material.

Benefits of automated optical inspection and simultaneous monitoring of laminated film.

The Dr. Schenk inspection solutions provide complete process control and defect classification. This helps manufacturers to gain maximum yield and deliver quality produce. The inspection of local defects and the measurement of lamination properties, such as layer thickness and homogeneity, are performed at production speed without any delays. Real-time feedback into the production line helps to achieve process optimization quickly and reliably.



Bubbles - typical defects to be detected and qualified in laminated solar panels

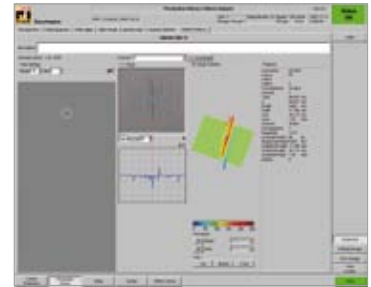
KEY FEATURES

- State-of-the-art Dr. Schenk LED technology for best illumination of film & foil & a wide range of layers
- High-speed camera with up to 320 MHz, offering high-resolution grey scale images
- Easy camera set-up: multiple inspection and measurement tasks via switching technology
- Single hardware set-up for defect detection and material property monitoring
- Easy teaching of defects in classification library

Laminated Film

Ensure product quality and optimize the lamination process

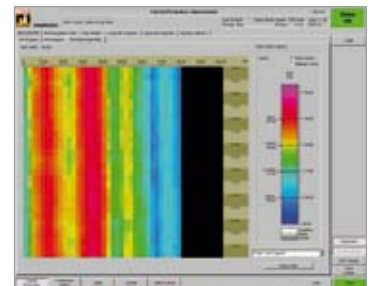
EasyInspect identifies defects and irregularities that can occur at any step of laminated film production. The system's innovative optical set-up and image processing and visualization software are adapted to the specific requirements of laminated film production.



EasyMeasure option: 100% process control

The combination of EasyInspect with EasyMeasure allows full control over the extrusion, laminating and finishing processes and through this over the quality of the end product. At a glance it offers:

- 100 % coverage of the base material
- In-line monitoring of material properties with existing EasyInspect modules
- Industry proven design without moving parts
- Operator-friendly visualization and real time 2D map in machine and cross web direction



Screen shots of EasyInspect (above) detecting a fold and EasyMeasure (below) showing material property variations

KEY BENEFITS

- Best available price-performance ratio
- Constant quality control to maintain standards
- Enhanced yield by early defect source detection
- Collection of process information for process improvement
- Fast return of investment through better process performance

About Dr. Schenk

Dr. Schenk GmbH, established in 1985, is a globally active, innovative high-tech company based in Munich, Germany. For the third decade now Dr. Schenk offers comprehensive solutions for automated quality assurance and production process monitoring for the solar, flat glass, film and foil, converting, optical media and semiconductor industries.

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