Float Glass Inspection and Measurement for Highest Quality and Optimized Yields

Typical Defects in Float Glass Production

- Bubble
- Inclusion
- Tin Defects
- Ream
**KEY BENEFITS**

- Multiple Image Defect Analysis (MIDA) for improved detection and classification
- Super-fast camera allows multiple channels in one camera without decrease of resolution
- Reduced costs and installation space through Twin-Line illumination – 2 optical channels in one illumination
- Efficient detection of tin defects and reliable assignment to top and bottom sides
- Reliable detection of reams and ream knots
- Scalable defect resolution for all types of float glass:
  - Architectural glass
  - Automotive glass
  - Thin glass
  - and other applications

**Complete MIDA solution**

Dr. Schenk’s MIDA (Multiple Image Defect Analysis) technology allows unique defect detection for the requirements of float glass production. During a single scan pass, multiple images are generated for comprehensive defect analysis. By switching between different camera channels and illuminations, one camera can inspect the glass for defects in core and distortion size, tin drops (top and bottom), as well as reams and ream knots. If the float line has integrated inline coating, GlassInspect detects also coating defects and monitors the homogeneity for process control.

**Advanced inspection for automotive glass**

- Supreme inspection capabilities for tinted glass of extremely low transmissivity
- Scalable resolution - use the default resolution of 100 µm, or change to a higher or lower resolution as needed
- Highest defect detection reliability through advanced defect measurement, defect classification, and defect severity evaluation
Efficient detection of top and bottom tin defects

During forming of float glass in a tin bath, tin residue can cling to the bottom of the glass ribbon, or drop onto the ribbon top side. Special channels detect tin defects with reliable top and bottom assignment.

Ream and ream knot detection

Ream defects are local thickness or refractive index variations which cause a wave pattern in ribbon transport direction. Dr. Schenk’s GlassInspect contains a dedicated ream and ream knot channel of high sensitivity. All reams are seen clearly by using a test derived from the “zebra” test. The technology used by GlassInspect for detecting reams and ream knots is unique and offers float glass manufacturers a crucial competitive advantage in their process and quality control chain.

Optimized Process Control

An intuitive and easy-to-use software visualization lets the operator see defects, material status, and thickness measurements at a glance. A database connection is available to access detailed production statistics by different keys, like time periods, material amount, defect number or defect density.

Production optimization by defect marking and cutting control

Marker and cutter tools allow cutting the float glass according to detected defect information, leaving out areas that have too many or too severe defects. The rejected glass pieces can then be returned to the furnace where they are re-molten and used in a new production run. GlassInspect has communication protocols to all commonly used marker and cutter tools.

Float glass production line

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!

For more information and contact details:
www.drschenk.com
mobile.drschenk.com

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

USA
Phone: +1-651-730-4090
Fax: +1-651-730-1955

Korea
Phone: +82-2-527-1633
Fax: +82-2-527-1635

Taiwan
Phone: +886-2-2920-7899
Fax: +886-2-2920-8198

Hong Kong
Phone: +852-2425-1860
Fax: +852-2425-6775

China-Beijing
Phone: +86-10-6503-2159
Fax: +86-10-6503-2161

China-Shanghai
Phone: +86-21-5836-6700
Fax: +86-21-5836-6701

For further regional sales & service representatives please refer to www.drschenk.com

Dr. Schenk GmbH
Industriemesstechnik
Einsteinstrasse 37 (Martinsried)
82152 Planegg
Germany