

Glass Inspect



GlassInspect.float 2.0 - Inspection and Measurement for Highest Quality Standards and Optimized Yields

INTRODUCTION

Dr. Schenk's new generation GlassInspect.float 2.0 for continuous flat glass production is an in-line inspection solution focusing on the quality assurance and process control for float and down draw glass manufacturing.

Glass products of today are facing a growing pressure to meet highest quality standards in order to compete in the market. At the same time, manufacturing and processing have to be optimized for maximum yield. GlassInspect.float 2.0 provides innovative inspection and measurement solutions helping to meet these challenges.

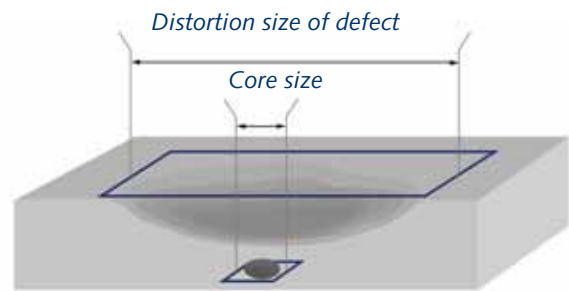


The New Generation of Float Glass Inspection

THE UNIQUE DUAL-CHANNEL TECHNOLOGY : HIGHLY ACCURATE DETERMINATION OF DEFECT SIZE AND TYPE

Dr. Schenk's GlassInspect convinces by its absolute reliable analysis of type, size and location of relevant glass defects. Considered unmatched in the industry, this performance advantage grounds on two innovations:

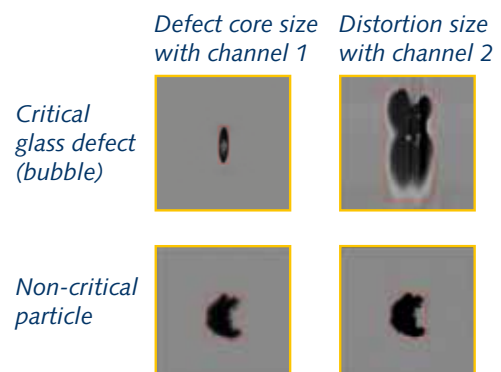
- A unique dual-channel technology combines two illumination concepts and enables the exact distinction between the defect's core size and its distortion size.
- The system's defect classification and image processing software are consequently adapted to the needs of today's flat glass production.



Glass defect with distortion

These advantages enable GlassInspect to ...

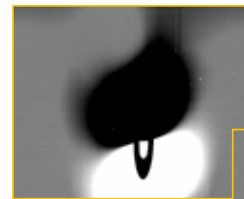
- ... deliver realistic, microscope like images as reliable decision basis for declaring material as "acceptable" or "no-go"
- ... determine the exact size of defects and clearly identify a defect's core size and its distortion size
- ... differentiate between relevant glass defects as e.g. bubbles or stones and non-critical contaminations like dust or other "pseudo-defects".



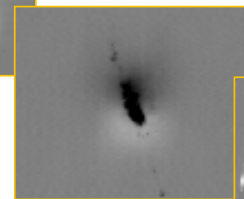
BENEFITS AT A GLANCE

- Dual-channel technology for reliable and accurate size determination of glass defects including the differentiation between core and distortion size
- Realistic, high resolution 2D and 3D images of defects via the intuitive visualization software
- Defect classification optimized for float glass application
- Easy integration into production lines with direct interface to cutting optimization systems and marker units
- High resolution CCD Line Scan cameras and high performance LED illumination units
- Innovative modular design allowing adjustment of hardware/software configuration and resolutions to individual environments at an optimized price / performance ratio
- Advanced analyzing and processing software according to SEMI standards for fast reaction on deviations from the production window

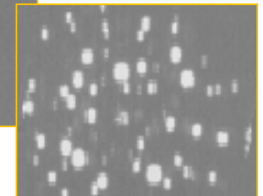
Representative defects of continuous glass analyzed by GlassInspect.float 2.0



Bubble



Inclusion



Tin Defects



Stone



Knot Line



Ream



OPTIONAL MEASUREMENT CHANNELS

- Defect Depth Location Measurement: precise localization of defects on the bottom, top side or inside the glass
- Ream Channel: detection of variations of the glass refraction index and of topographical inhomogeneities of the glass surface
- Tin Channel: reliable detection and differentiation between bottom/top side tin defects to other local glass defects and contaminations or dust.
- Measurement of glass thickness and material stress.

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