

INSPECTION TECHNOLOGY | FSP^{G10}



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Inline Inspection for Rectangular Glass Plates

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FSP^{G10} is an optical system assessing the contour and size of sheets as well as defects and edge imperfections resulting from scoring and snapping.



Proceeding

The glass sheets are inspected on the fly. The determined data are transmitted to the line control via interface.

Hardware

Advanced computer architecture combines several processors working in parallel, enabling high-speed measurement as well as complex calculations and evaluations.

Software

Advanced evaluation algorithms are a core element for reliable defect classification. Multiple modes are available to display the results.

Illumination upgrades

All existing Grenzebach camera systems can be upgraded with universal upgrade kits. By changing cameras, illumination, hardware and software, performance of a complete new system is achieved. The existing control cabinet and gantries remain as they are.

Key features

- ▶ One system for all glass thicknesses
- ▶ System adaptable for all types of flat glass: clear, coloured or coated
- ▶ High resolution optics for optimised signal contrast inspection
- ▶ Modular LED illumination, lateral retractable for cleaning and maintenance
- ▶ Illumination unit for inspection in reflection mode
- ▶ Calibration gauge attached to illumination, no interfaces to the conveying system
- ▶ System is totally independent from environment
- ▶ Variable definition of contour defects
- ▶ Detection of top roller traces
- ▶ Marking spot detection from top
- ▶ Smart teach for easy definition of a new glass type
- ▶ Glass database allows to manage different glass types (e.g. clear glass, green glass ...)
- ▶ Trend analysis for repeating defects (minimizes glass losses)
- ▶ Image analyse function is to scrutinize a glass sheet and the possible defects contained in it
- ▶ Data logging with the history screen allows opening and viewing old log files on already inspected glass sheets
- ▶ The individual tolerance data sets with the referenced values for the individual defects determine as from which value a warning or a reject message is generated and, if necessary, forwarded to a master control system. The tolerance management is provided in standard tolerances and enhanced tolerances
- ▶ Statistic software for process monitoring provides the user with a graphical tool to represent the number of differently assessed glass sheets that he may then evaluate by selecting the start and end time to focus the statistical information over a specific period of time
- ▶ Remote diagnosis and maintenance via internet

