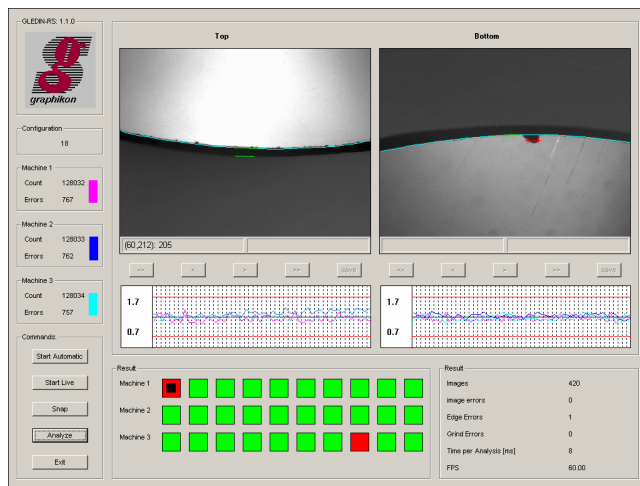
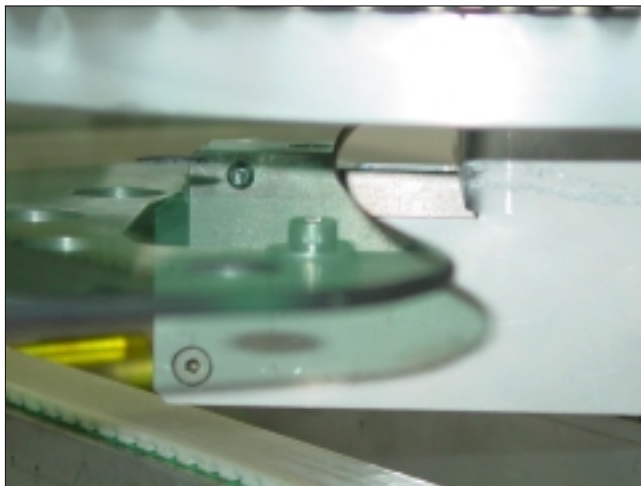


# In-Line Inspection Of Ground Edges

## G/Glas Chip Detector



Online-display of quality status



Sensor head

### › Challenge

Advanced sheet glass manufacturing lines require

- In-line inspection of the quality of ground edges of flat glass sheets,
- Measurement and classification of chippings and cracks,
- Supervision of depth and symmetry of grind,
- Complete observation of the edges.

Depending of the pane size a cycle time of about 10 seconds has to be achieved.

### › Solution

The glass sheets are loaded by a ropebelt conveyor into the inspection machine. In the positioning station the pane is aligned exactly. Thereafter the pane is delivered to the inspection station, where the sensor head is guided along the complete edge. During the inspection time two CCD-sensors are permanently taking images of both sides of the edge. These images are processed in real time. Now the panes are leaving the inspection machine.

The Chip Detector is able to identify all typical edge defects like chips and cracks and even smallest deviations from the ideal "C"-profile ( $< 0,1$  mm). All detected defects are measured and classified. Separate tolerances can be defined for both sides and particular sections of the pane. This for instance allows the definition of higher quality requirements for visible regions of the edge. In addition to monitoring the grinding depth the Chip Detector continuously inspects the symmetry of the grinding in order to identify malfunctions in grinding process in due time.

The Chip Detector is suitable to inspect complex shapes of glass sheets such as concave and convex curves and customer-specific geometries of grindings.

The Chip Detector can easily be integrated in any manufacturing line by just adapting the loading device.

# In-Line Inspection Of Ground Edges



## › Advantages

- Suitable for all kinds of flat glass
- Easy process integration
- Very high speed of inspection
- Complete observation of the depth of grind
- Continuous supervision of the grinding process
- Identification of process malfunctions in due time
- Detection of grinding defects, such as fissures and chipping
- Robust recognition, even in complex curves
- Easy conversion to new geometries of panes
- High efficiency

## › Technical data

Accuracy of measurement	± 0,1 mm
Cycle time (2 m edge):	8 sec
Max. Speed:	1200 mm/s
Number of cameras:	2
Dimensions (W x H x D):	ca. 3 x 1,6 x 2,5 m

## › Contact

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In cooperation with:



and



## G/Glas Chip Detector



Chip Detector in operation