



Case Study

Defect-free flat glass production at Şişecam thanks to fully automatic 100 % inspection



Customer & Challenge

A clear matter: Flat glass must be free from even the smallest scratches, inclusions, and coating inhomogeneities before delivery to the customer. For this task, **Şişecam Trakya Glass Bulgaria EAD**, a company belonging to the Şişecam Group, was looking for a quality control solution. The objective of the leading European manufacturer of coated flat glass products was to completely do away with optical inspection if possible, while at the same time improving precision and reliability. Damage and contaminations needed to be detected just as reliably as production defects in the products manufactured using the float glass process.

“Previously, we relied on both automatic inspection and manual, optical inspections of the products. It is very difficult and time-consuming to detect the smallest defects using this method. On top of that, damage frequently occurs during the glass handling of the quality control process itself. We wanted to avoid that with the new system.”

Hasan Ismail, Production Manager at Şişecam Trakya Glass Bulgaria EAD

The Solution:

P2 (PowerPlate)-Coating

- **Reliable:** Recognizes even the tiniest defects such as pinholes, dirt, and scratches, as well as coating defects over large areas.
- **Fully automatic:** 100% surface inspection including classifications of deviations.
- **Precise:** The combination of different camera angles, multispectral imaging, and complex evaluation algorithms ensures measurement results of the highest accuracy.
- **Cost-optimized:** Continuous, automated quality control directly in production – no manual inspection needed.
- **Effective:** The data gathered when analyzing defects is directly used to improve production processes.

P2 (PowerPlate)-Coating



"We have had very good experiences with ISRA. ISRA is very proactive when it comes to developing new technologies for glass inspection. In addition, after installing the systems, the company has always assisted us with outstanding service and support here at our premises. We look forward to continuing our collaboration in the future."

Hasan Ismail
Production Manager
Şişecam Trakya Glass Bulgaria EAD

Customer Benefits



100 % automatic inspection – without additional manual work

By installing the P2 (PowerPlate)-Coating system, Şişecam Trakya Glass was able to completely do away with the manual optical inspection of the glass panes manufactured using the float glass process. The 100% quality control solution detects the tiniest scratches, holes, and sealing ring marks just as reliably as coating defects and inhomogeneities. This is possible thanks to the combination of different camera angles, multispectral imaging, and complex evaluation algorithms



Increased customer satisfaction – and absolute traceability in the event of queries

As the delivered products are of flawless quality, customer satisfaction is rising. Should a customer have any questions despite all of this, the manufacturer can trace the quality control results for each manufactured pane of glass. All measured values are saved and archived for this purpose.



Continuous improvement of production processes

The measurement results of the inline inspection system are used for the fast and continuous improvement of production parameters, thus reducing production waste to a minimum. As a result, Şişecam Trakya saves time and production resources, as well as preventing damage caused by manual handling of the materials. This ultimately makes the production more efficient



Potential for further improvements

In the future, Şişecam Trakya Glass will work closely with ISRA VISION to improve its production processes even further. To this end, it plans to determine correlations between production parameters and inspection results. These will provide information on which factors influence the quality of the end products in production and how.

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