ISRA’s FLOATSCAN Coldgauge & Stress system makes frequent manual sampling for quality checks redundant

Top quality for raw building glass: quality assurance with automated real-time thickness and stress measurement

Darmstadt / Herten (GER) / Qinhuangdao (CN) – Qinhuangdao Industry Research & Design Institute, a specialist for raw building glass, upgrades its quality assurance with ISRA VISION’s system for automated measurements. ISRA’s FLOATSCAN Coldgauge & Stress system – combined with a product extension for optimized cutting of glass sheets – now increases quality and yield in the shortest time and successfully achieves higher customer satisfaction.

Automated thickness measurement significantly improves product quality and cost control: Minimum material thickness is commonly defined by the customer and therefore directly influences the company’s reputation and success, while too thick glass means an unnecessary waste of resources and more expenses. The correct stress, on the other hand, is crucial for the quality of the glass and prevents damage or breakage in packing, transportation, deep processing or use, which increases safety and avoids economic losses. Since ISRA’s FLOATSCAN Coldgauge & Stress system provides constant control over these two criteria, it has a direct impact on the ability to produce within the exact customer specifications and to serve higher quality orders while loss is avoided.

Twofold inspection benefits the entire process chain

Installed at the institute, the system quickly saved the frequent manual sampling and thickness measurement due to its reliable results. Installed at the cold end, FLOATSCAN Coldgauge & Stress gives imme-
Immediate feedback to the hot end process to allow for timely adjustments, when quality issues occur. While the system is usually used by the quality department, the production department – responsible for all the other processes such as melting, molding and the annealing section – also benefits from it. By reporting the thickness and stress measurement results in real time, the production department is able to react immediately to occurring defects and remedy the root cause in the process.

“We see clear positive effects of the FLOATSCAN-system, objectively monitored with statistics based on the system’s”, says Mr. Wang Jian, Vice Director at the Qinhuangdao Industry Research & Design Institute. After just one month the ISRA system was fully installed running steady, and quickly producing the intended results – including intelligent cutting, which spares the low-quality areas on the glass sheet to increase sheet quality and reduce waste. In the Qinhuangdao Institute’s case, the combination of the FLOATSCAN-system with optimized cutting significantly increased the high-quality yield rate by up to 7 percentage points. According to the feedback from the sales department, the number of customer complaints decreased by around 12 percent.

**Inspection technology enables value-adding data usage**

The gathered data not only provide evidence of the system’s effectiveness, they also enable comprehensive analysis of the line output and document the produced quality as proof for the customer. Therefore, it allows for continuous process optimization and root cause analysis. With the appended database that maintains the inspection results, the melting and forming departments receive a faster and more intuitive method for historical tracking of the produced quality. The sales department is also enabled to trace the quality grading of a product back through the production process, using the information saved in the company’s database. Additionally, the company uses quality statistics to regularly provide reports to production management, offering a basis for well-informed decision making.
Purchase of a second system already planned

Based on the combined approach of inspection and smart cutting, overall efficiency and quality were successfully improved. This opens new market segments with higher quality standards and attractive revenue potential. Being very satisfied with the results, Qinhuangdao Industry Research & Design Institute already plans to upgrade other lines with ISRA’s FLOATSCAN Coldgauge & Stress as well.

Images

![FLOATSCAN Coldgauge & Stress](image_url)

FLOATSCAN Coldgauge & Stress with its moveable sensor provides immediate feedback about the glass ribbon’s thickness and stress.
In addition to thickness and stress measurements glass quality and yield are increased in the shortest time with ISRA's automated defect inspection system FLOATSCAN-Basic.