

## Success Story

ISRA Coating Inspection Technology combines the capability of detecting small defects with the ability to discovering large color inhomogeneity. All quality relevant defects are mapped and classified to guarantee correct quality grading of sheets, providing production information to Engineering to optimize the process.



### The challenge

Manual quality inspection can be a time consuming, error-prone and rather costly effort. Wuhan Changli New Material Science and Technology Ltd. in China, one of the most successful producers of specialized glass products in the world, recently decided to make the switch from manual to automated inspection. The targeted result was an increase in the efficiency of its lines while ensuring the consistently high quality of its thermally insulated glass, thanks to the help of ISRA's P<sup>2</sup>-Systems for float glass inspection - P<sup>2</sup>-Color and P<sup>2</sup>-Coating.

### The solution

The two systems are designed for detection of all types of coating defects on flat glass as well as for full surface color monitoring, offering a fast return on investment. Quality engineers and inspectors receive the correct type and size of any objectionable defects, easily rejecting non-optimal products or stacking them separately.

**"ISRA supported us throughout the project and afterwards. The ISRA engineer contacted us by phone when he was alerted by the system alarm and gave us remote support immediately to fix the problem as soon as possible",** reports Gui Rong.

# ISRA

## VISION



**"With the ISRA systems, the quality of our entire production chain improved very quickly. This means an important advantage in monitoring the results and corresponding processes as well as increased convenience in quality control"**

Ms. Wang Gui Rong, General Manager  
Wuhan Changli New Material Science and Technology Ltd.

### P<sup>2</sup>-Color and P<sup>2</sup>-Coating

- 100 % reliable inspection
- Maximize throughput
- Increase yield
- Reduce false detections
- Fast return on investment

### Outstanding perfection for glass inspection

ISRA's P<sup>2</sup>-Systems for float glass inspection are able to find the root causes of errors, quickly providing that info to the quality assurance team. ISRA enables manufacturers to maintain a quality history of each product and offers the opportunity to adjust and improve production processes based on quality data. With P<sup>2</sup>-Coating and P<sup>2</sup>-Color, the manufacturer inspects products for pinholes, debris, scratches, arcing, coating and color inhomogeneities and many more important defects that occur after low emissivity coatings are applied.

## Excellent classification performance

The P<sup>2</sup>-systems provide a dedicated server PC with long term data storage to document and monitor defects and respective trends. Scratches, arcing, water marks, glue and debris were the first defects to be reliably detected and classified. The classification of the ISRA systems is based on the simple and time saving tool QuickTeach. Beyond rule based classification, QuickTeach can be trained to automatically detect relevant features of a defect, successfully recognizing complex relationships in real time. Every classifying decision is documented and traceable, which was one of the most important issues for Wuhan Changli.

## Support for process optimization

Wuhan Changli wanted to overcome the deficits of manual inspection in the most cost efficient way – with ISRAs P<sup>2</sup>-Systems. The P<sup>2</sup>-Color and P<sup>2</sup>-Coating enhance the quality personnel's judgement, reducing false detections and linking the quality and production departments more closely, enabling fast reaction to events on the line. Through better production monitoring, processes were continuously optimized and throughput was consistently expanded, leading to an overall yield improvement.

By visualising quality data in trend reports, the systems deliver a very valuable precondition for production control and analysis and enable quick actions for process improvement.

## Comprehensive Portfolio

The P<sup>2</sup>-Color and P<sup>2</sup>-Coating offer highly reliable systems allowing users to meet every specification. In addition to the inspection of architectural glass, ISRA offers unmatched inspection capability on high-end coated glass similar to what is needed in the automotive industry or for photovoltaic pattern glass. Through various optional extensions like additional lighting or camera angles, ISRA products form a portfolio of versatile solutions to control production lines, increase yield, and to bring the best out of any production process.



Integrated quality, process and yield management. User-friendly and intuitive Monitor Master with color image and color profiles shows all relevant Information.



Space saving and robust design: P<sup>2</sup>-Color integrated into P<sup>2</sup>-Coating, with advanced air cooling for easy maintenance.

## ISRA VISION

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