

# The power of digital inspection

YOUR QUALITY. OUR FOCUS



## INSPECTION OF **RAW BOARD**

CONSISTENT AND CUSTOMIZED GRADING OF EVERY PANEL



### WHAT WE DO FOR YOU

ARGOS SOLUTIONS AS develops and supplies automatic surface grading and panel repair systems. ARGOS aims to provide efficiency by automatic controlling of the surface quality. We deliver innovative and creative solutions.

### YOUR **ADVANTAGES**

- > 100% inspection at full speed
- > Every panel is graded
- > Customized and consistent grading
- > Objective grading, only relevant defects are downgraded
- > Reduce manpower cost
- > Automatic calibration
- > Automatic cleaning
- > Automatic registration of new products
- > Accurate reports and statistics, take control

The new Argos Grading System (AGS) is a powerful and effective system for automating the inspection of all types of surface defects in raw board surfaces. The Argos system is designed to detect surface defects under the most challenging conditions. The system holds an unlimited number of grading recipes, thus ensuring objective grading according to the customers' defined surface quality.

The strength of the Argos system is its ability to detect, categorize and classify surface defects. For this purpose, multiple light sources are used to capture images with different properties to detect the defects. How visible each defect is depends on the viewing angle and light distribution across the panel. The Argos system generates multiple images from the panel using different light sources in different angles and direction, just like a human who changes the angle when holding the panel up against the light when looking for small defects.

The increased use of thinner papers, high-gloss papers and high-quality lacquering no longer hides surface defects in the raw board. It is not uncommon that raw board defects count for up to 50% of the downgrades on laminations lines. The Argos system optimizes grading, depending on the end-use of the raw boards, and eliminates downgrades on the lamination lines resulting from raw board defects. Existing customers have seen an increase of more than 2% on the lamination line after installing the Argos system behind the sander.

Maximizing A-quality without  
sacrificing customer satisfaction.

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## NEW TECHNOLOGY

The Argos system utilizes the latest camera and illumination technology developed by world leading suppliers of the vision industry. The modular system can cover panel width up to +3.2 m. (+10ft.) and generates multiple images for detection of 2D and 3D defects.

The images are transferred to a PC and analyzed for surface defects by the Argos image processing software. The built-in defect library contains separate detectors for each defect. It keeps track of defects by size and location and grading rules can be defined according to type of defect, location and amount.

Digital signals controlling the sorter are activated based on the grading result. Customized grading depends on correct detection and categorization of all surface defects by down-grading only the defects that the customer cannot accept.

## RELIABLE SYSTEM

Argos engineers has focused on reliability and low maintenance when designing the system. The system is equipped with solid state light sources, LED and LASER, to ensure maximum lifetime as well as reduced need for calibration. The intelligent control system, maximizes the lifetime of the light sources to +200.000 hrs. without replacement.

The system frame is preassembled and designed to ensure a quick and trouble free installation as well as reducing the risk of influence from vibration and external particles. The narrow designs makes easy retrofit to existing lines and reduces the opening in the conveyor to ensure smooth panel transportation. The latest generation includes new improved automatic cleaning methods ensuring stable operation as well as reduced need for manual cleaning.

## USER-FRIENDLY OPERATION

The latest ARGOS Image Processing software includes easy-to-use functionality for operation and adjustment of defects and recipes. It includes defect specific parameters and functionality for grouping defects. Modifications can be made by defect category, size, location, density and group relationship.

## GLOBAL COMPANY

- > One system covering all surface inspection needs from raw board, full-size laminates to furniture components.
- > 200 installations worldwide in 30 countries.
- > Reference installations with leading global manufacturers.
- > Owned by Løvenskiold - Vækerø, a privately owned company with a long history, established in 1649.



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