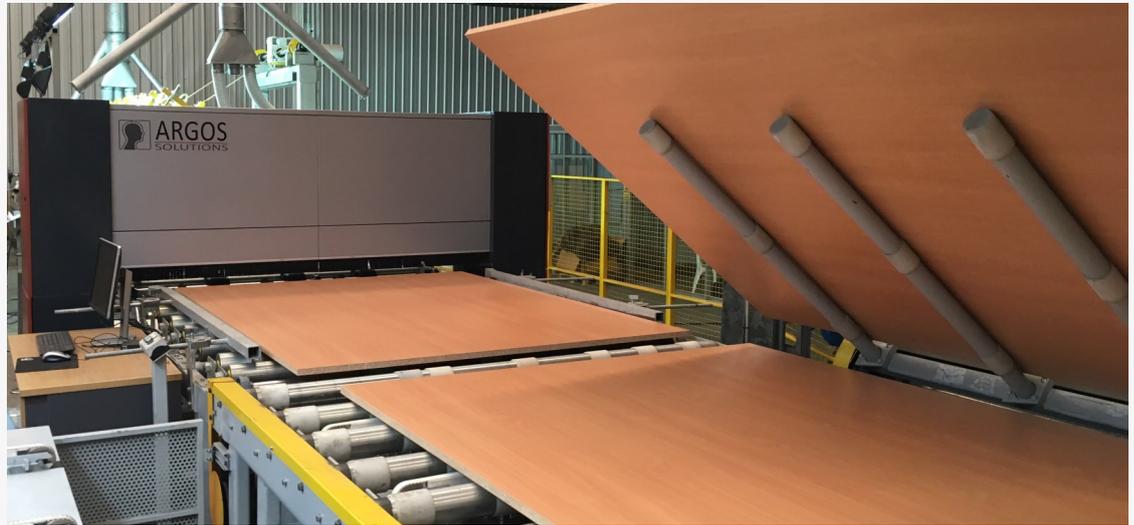


# The power of digital inspection

YOUR QUALITY. OUR FOCUS



## INSPECTION OF **DECORATIVE PANELS**

GRADING AND QUALITY MONITORING OF DECORATIVE PANELS



### 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 decorative surfaces. The system is designed to handle all panel sizes from small furniture components to full size panels. The large variety of decors and surface textures, combined with high line speeds, makes decorative panels very challenging to grade for both humans and automatic systems. The process itself, and the large number of variables from decors and substrates, can create many different types of surface 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. In one angle, the defect is not visible, while changing the angle, it is seen.

The different images, captured from the panel, are all processed based on being captured within the same panel. This eliminates the risk of false detection because of transportation inaccuracy that traditional pattern-matching systems are exposed for when comparing a captured image with a reference image.

The AGS design is modular and flexible and can be retrofitted to most decorative lines with only minimal modifications.

Maximizing A-quality without sacrificing customer satisfaction.

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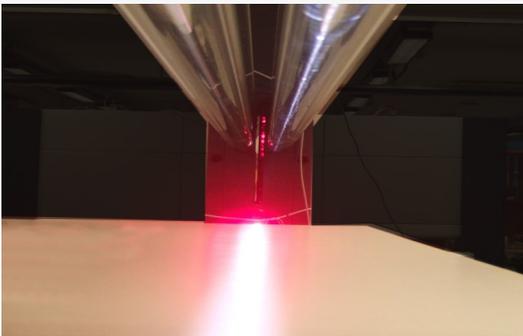


## NEW TECHNOLOGY

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.

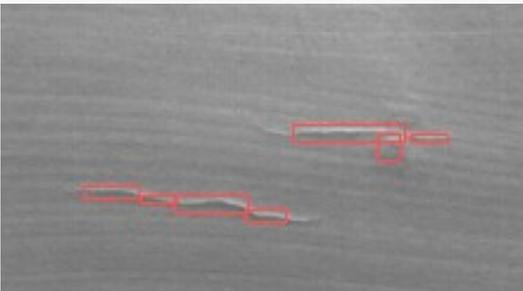
Digital signals controlling the sorter are activated based on the grading result. Customized grading depends on correct detection and categorization of all surface defects by down-grading only the defects that the customer cannot accept.



## 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.



[WWW.ARGOSOLUTIONS.NO](http://WWW.ARGOSOLUTIONS.NO)