

ELINTA
ROBOTICS



SmartPeek

Furniture Boards Quality Control System

The surface inspection system **SmartPeek** is specialized modular quality control system designed for use in the furniture production line. The automatic image processing system guarantees continuous inspection of every furniture surface. Depending on the demands it can vary from the simple system, checking the drilled holes on one side of the board to the extensive system controlling the dimensions and quality of every surface of the board.

There can be multilevel interaction between the system and the production line: beginning from stopping the line to prevent the scrap production going up to the defect marking included and robotized defected board sorting. It is possible various level integration with the production management systems – from local defect database to full integration of recipes and transferring defect info in to the production line or factory databases.

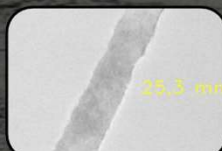
Defect detection



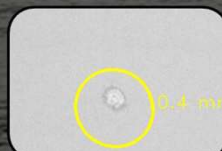
Glossy surface / shiny spots



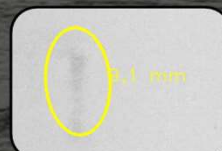
Spots, dots, dirty surface



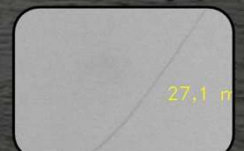
Inclusions



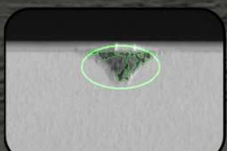
Pressure mark on surface



Permanent skid marks



Surface scratches



Chipping on the edges



Laminate overlays



Surface scratches



Edge band not glued properly



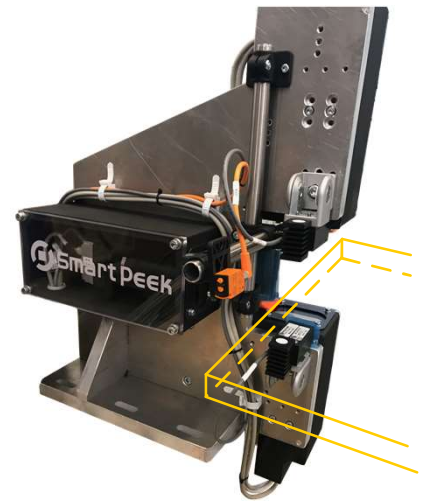
Peeled surface



Missing edge band / band gap

Edge Quality Control Module

- Edge control module is designed to detect the defects on the laminated edges of the furniture boards.
- It consists of 3 high resolution line scan cameras and 3 programable LED light sources. Board presence sensors are also integrated in the module.
- The module is designed to be installed in the edge laminating equipment, but also can be used with a specialized conveyor.
- Special edges control module is designed to detect and measure the holes on the laminated edges.
- This special module is designed to be install at the end of the drilling equipment. Also it can be used with a specialized conveyour.



Board Surface Analysis & Drilled Holes Position Inspection



- Control of damages and measurement of width of milled grooves.
- Measurement of positions and diameters of holes on the board.
- Measurement of the chipping on the hole edge.
- Board surface quality control module is designed to detect defects on the main surfaces of the board.
- SmartPeek hardware and software is designed to work with various boards designs, thicknesses and colours.

Special Modules According to Customer Needs

- Mark the defected boards with special stickers.
- Give signal to some equipment, that removes defected boards from the line.
- Install robotized board removal and sorting position.
- All new systems are always widely discussed with the costumer.



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