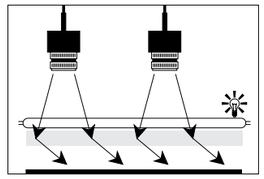
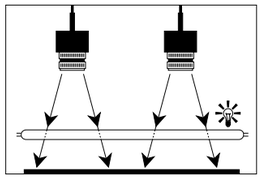
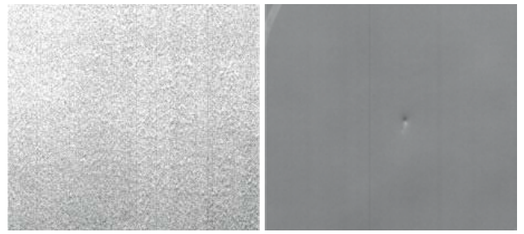
ColourBrain® Furniture

Inspection modules for the defect detection and process monitoring

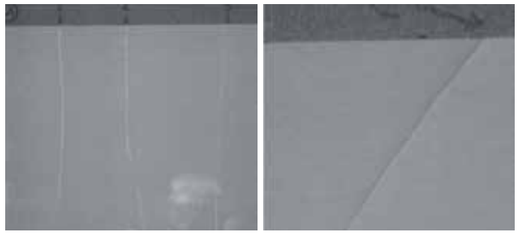
ColourBrain® Furniture





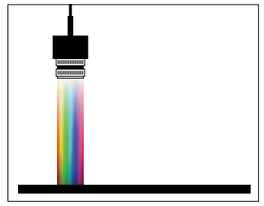


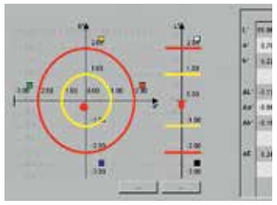
Reflex module with a resolution of 0.2mm for detecting all defects on a high gloss surface.



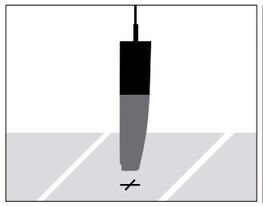
Colour cameras for detecting lacquering and coating errors.

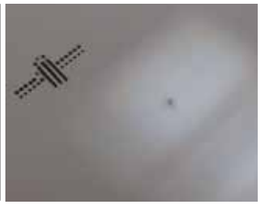
ColourBrain®





A compact inline colorimeter constantly checks for the smallest colour deviations with a precision of < ΔE 0,3.





Positional accuracy of the defect marking.

Baumer

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Baumer
Passion for Sensors

ColourBrain® Furniture

Automatic optical inspection and process control in the lacquering line

ColourBrain® Furniture

Automatic optical inspection and process control in the lacquering line

Highlights

- Double sided inspection of surface
- Detection of the smallest defects
- Measuring of colour
- Control quality of sorting and process control

Your benefit

In the lacquering line all elements are checked for the smallest defects and the colour is constantly measured. The sorting process is performed automatically and according to quality rules, without excessive sorting and without missing defects. *ColourBrain*® systems continuously monitor the quality of products, detect variations and trigger alarms when an increase in the number of defects is detected.

Detected lacquering defects are classified in defects that can either be repaired or in defects that lead to the rejection of the piece. The position of the defects can be used to cut the board in an optimal way. The goal is to reduce scrap and use the multi format panel as ideal as possible.

With help of the inline colorimeter the colour of the applied lacquer is constantly checked and an alarm will be triggered if drifts in the colour consistency occur. Defected pieces can also be sorted out.

Application

Cameras with reflective illumination and fast high precision colour camera systems are combined in the *ColourBrain*® installations to detect the smallest dust particles and pinholes.

Optional, an inline colorimeter can be installed that has a measurement accuracy of < ΔE 0,3 to constantly check your colour consistency.

Multiple *ColourBrain*® camera systems that are installed in one production site can be connected to each other and protocol the quality of each shift, each product and each production volume 24 hours a day and 7 days a week. When using board or strand lacquering the camera system knows the eventual cutting pattern and marks the parts accordingly so single segments can be sorted out after cutting.

Through permanent analysis of the production data Baumer systems help to optimize the production process and reduce rejects.

ColourBrain® Furniture

Quality improvement and process control through automation

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ColourBrain® cameras detect every damage, every decor defect and every colour deviation at any speed with the highest precision.

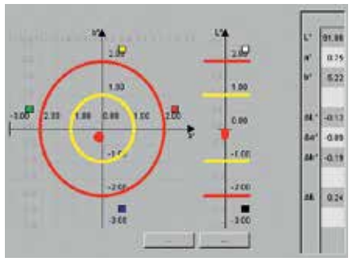
In case of a serial defect an alarm will be triggered to minimize rejects and to guarantee a consistent production quality, long term stable, reproducible and relentless.

Installation in the lacquering line.

ColourBrain® Colorimeter

With the compact inline colorimeter the lacquer colour is constantly monitored to make sure that the set tolerances are adhered.

The measuring threshold is very tight to alarm a colour deviation before the human eye can even detect it.



Check of colour for deviations in Lab in respect to master sample and in absolute values.

Marking a defect on protective foil.

ColourBrain® Technology

The patented *ColourBrain*® technology imitates human perception for checking decorated surfaces. It learns to differentiate between GOOD and BAD based on few samples. Even in case of smallest production volumes and frequent changes down to lot size one, the system immediately adapts to the new product.

The user deploys an intuitive user interface that is easy to understand with clearly structured graphical menus in order to teach in new products, set tolerances and analyze the frequency and cause of defects with statistics and defect images.