

## Paper board packaging inspection: Make invisible defects visible! Highest quality carton board



### Optimized, efficient, quality board production ensuring optimum processing

The use of paper board packaging has reached a high level of consumer acceptance worldwide. Extremely important: the quality! At the point of sale, the decision to buy or reject a product is usually made within 1.6 seconds AND 35% of the purchasing decisions are based on the package's appearance. This greatly impacts the demand for high-quality board packages - globally. The challenge for manufacturers: critical paper board defects, such as streaks, are hard to see before printing, but become clearly evident after printing.

For paper board suppliers, it is essential to identify these defects online as soon as possible to eliminate root causes of quality issues and prevent the delivery of scrap, thereby ensuring customer confidence and satisfaction.

Only then can one eliminate root causes and prevent the delivery of scrap, thereby ensuring customer confidence and satisfaction. The solution: the latest generation of web inspection system (WIS), developed specifically for these "hard-to-see" defects.

Employing special lighting and latest camera technology, highest board quality can be assured. Information to reduce even the smallest or most difficult to see critical defects and to improve the process. Accurate defect classification results in fast root cause analysis and corrective action – reducing waste.

### Applications

- For all paper board machines to:
  - optimize process and production
  - maximize efficiency
  - avoid critical, hard-to-see defects even in middle layer(s) or on coated surfaces
  - improve the process – online

### Advantages

- Reliable detection and classification of critical defects.
- Highest board quality even for high-value packaging customers
- Highest level of inspection guaranteeing quality throughout even at maximum speeds
- Verified fulfillment of latest quality demands
- Added value and attainable higher retail prices
- Improved printable surface quality to appeal to high-end customers

## Ensuring best board quality for high-value board packaging

The inspection system provides a scalable platform adaptable to machine specific requirements. Equipped with the latest high resolution cameras, advanced image processing algorithms and optimized illumination technology, defects have no chance to escape detection. Superior, crystal clear defect images are the basis to detect even tiniest defects that frustrate printers. The classifier – delivered ready-to-go with the system, ensures immediate value and fast payback. In addition to detecting and classifying defects in real-time – trends, statistics, and information for benchmarking and process improvement are provided.

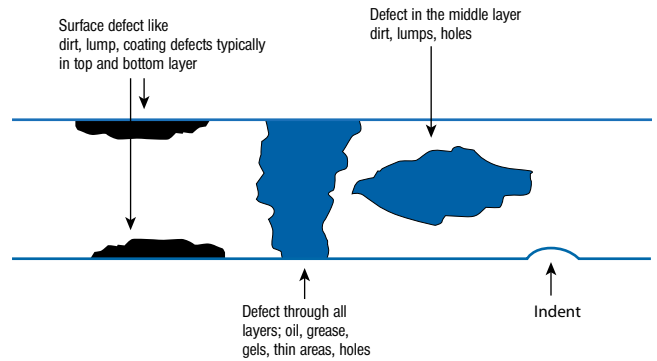
### Further benefits

- The high resolution camera reduce system and maintenance costs by decreasing the required number of cameras
- The powerful LED illumination enables transmission set-up detecting defects in board's middle layers, ensuring longer component life

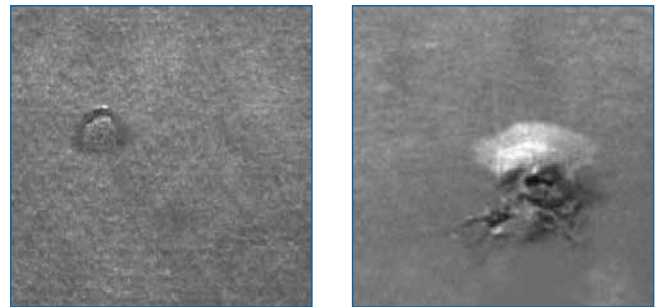
The turn-key standard solution helps paper board suppliers to meet the latest quality demands with certainty and increases production value.

### Prominent Features

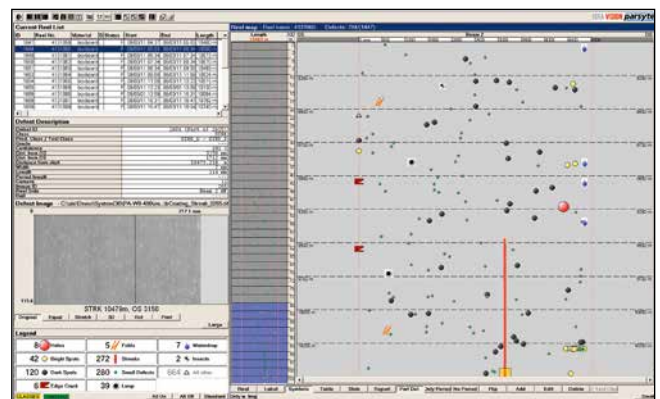
- Detection of smallest imprints (300  $\mu\text{m}$ ) due to high MD resolution
- Best streak detection down to 50  $\mu\text{m}$  streak width, due to best CD resolution
- Special set-up, making "invisible" defects visible such as:
  - low contrast streaks
  - indents
  - butterflies
- High power LED illumination even for transmission set-up
- Detection of defects even in middle layer(s)
- Online alarm on defects, defect density, trends



Schematic view of typical defects on coated boxboard



Typical paper board defect images



Small streaks: detected and visualized

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