

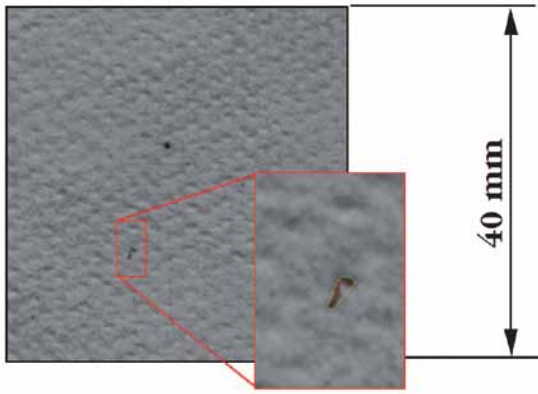
Web Imaging System Pulp Defect Analyzer

ABB's Pulp Defect Analyzer detects and reports defects in pulp. It is an automated online inspection system based on smart digital camera technology with high resolution images and advanced machine vision tools.

A pulp imaging system operates through a single controllable light beam. The system inspects the length of a bale with consistent and repeatable results, detecting and reporting defects as small as $0,04 \text{ mm}^2$. With the help of applied machine vision technology, the size of each defect can be determined to an accuracy of 0.01 mm^2 .

A Pulp Defect Analyzer can be installed to cover the whole width of a pulp web. In practice, inspecting only a narrow strip is sufficient, since the dirt content can safely be assumed to be evenly distributed along the cross-direction of the web. A pulp imaging camera can be installed, either with transmission or reflection illumination.





Detection

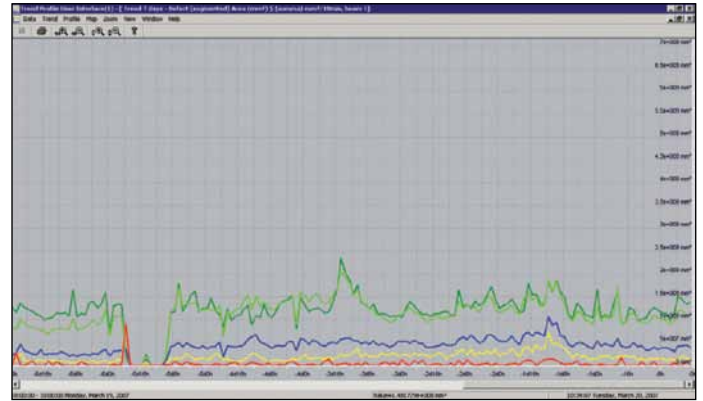
Technical data:

Viewing area:	160 mm / camera
Impulse tachometer inputs:	50 kHz limit frequency
Power supply:	220 V or 110 VAC, 50 ... 60 Hz 250 W max
Environment:	Temperature range: 0 ... 50°C Relative humidity <95%, no condensation

The Pulp Defect Analyzer is equipped with a camera sensor, light source beam, power supply box, pulse encoder (impulse tachometer) and operator pc.

Reporting the results:

- ABB HDI800 Camera triggers a photographic image of each defect
- Defect image is delivered to a PC for analysis
- Image analysis uses over-sampling
 - More resolution in defining the defect border
 - Less pixelization around round spots
- Defect size definition can easily be calibrated against laboratory measurement
 - Size definition accuracy up to 0.01 mm² precision
- Automatic classifier distinguishes defects from normal dirt spots.
- Total defect area and number of defects in size groups per m² are reported according to ISO and Tappi standards
- OPC interface with mill-wide systems
- Intuitive user-interface
 - Online DefectMap
 - Defect gallery
 - Trending and profiling



For more information please contact:

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