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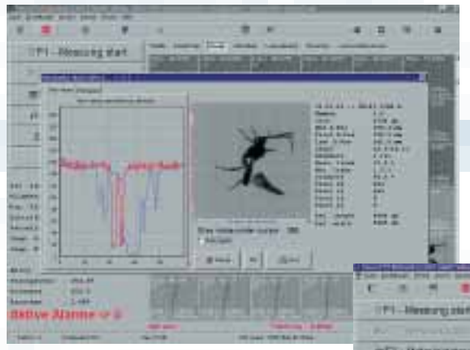
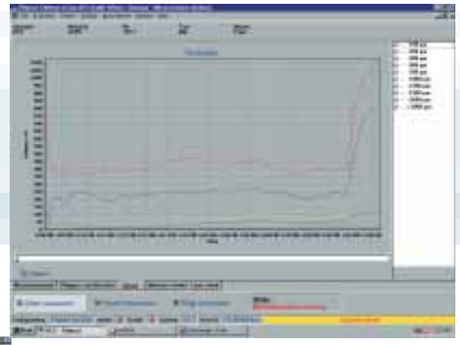
The Solution for the Polymer Industry

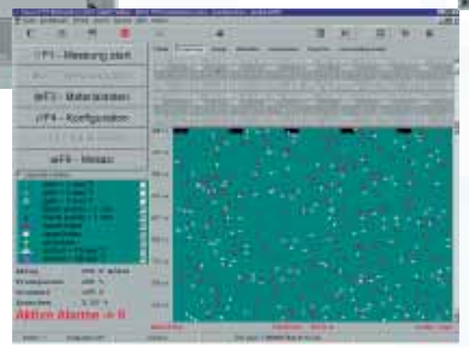
Web Inspection System
FSP 600

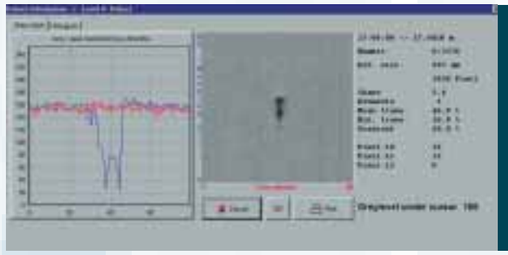
The Original by OCS

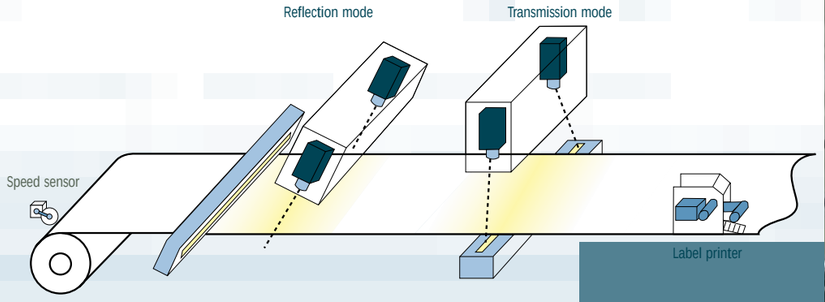
Wide Web - Inspection FSP600











OCS Wide Web Inspection

FSP600 is a modular surface inspection system for use in production. The production quality of the material to be inspected is assessed optoelectronically. The measurement data are stored in an inspection report so that later analysis (e.g. monthly statistics) is possible at any time.

The modular concept permits the use of several cameras working in parallel so that optimum adaptation can be achieved for every problem. A system is dimensioned as a function of the production speed, the inspection width and the inspection accuracy (resolution) so that complete inspection of the entire web width is ensured.

In addition to the mere recognition and classification of defects, the system can also be used for analysis, recording, archiving and documentation purposes. Every defect detected is transferred with the defect image to the measurement protocol together with its feature vector (position, size, shape ...).
The system can be modified exactly to suit the respective requirements using the comprehensive software packages.

Performance features

- **Modular architecture**
  Simple possibility of expansion, easy adaptation
- **Optimum lighting electronics**
  Use of special lighting techniques depending on the material to be inspected
- **Process synchronisation**
  Linking of the inspection system with the production line (automatic recipe pre-selection, roll-changing signal, inspection stand-by mode ...)
- **Real-time defect analysis**
  Rapid evaluation and representation of the measurement results so that production faults can be quickly rectified
- **Easy teach-in classification**
  Defects are automatically classified by their features thanks to the use of intelligent fuzzy technology
- **Automatic defect marking**
  Alarm signals for marking defects in current production can be configured individually
- **Table view**
  Tabular display (absolute, per 10 m^2, 100 m^2 and trend display) as a function of defect size and type
- **Defect map**
  Continuous overview display (wallpaper view) of the defects in a symbolic presentation
- **Mosaic view**
  Continuous display of the defects detected as real images (display of defect sections)
- **3D defect analysis**
  High-performance software tool for improved image analysis
- **Transparency measurement**
  For transmittance measurements, online determination of the absolute and relative transparency values
- **Time history**
  Graphic representation of the defect classes detected as a function of time, length or parcels
- **Web distribution**
  Graphic display of the defect classes as a function of the width information
- **Lane evaluation**
  Lane-related evaluation and documentation. Automatic or manual setting of the lane widths possible
- **Open data format**
  The protocol data can be converted into all common file formats (Access, Excel ...)

Fields of application

- **Films (transparent, translucent, opaque ...)**
- **Sheets**
- **Coated web material**
- **Industrial textiles**
- **Paper**
- **Non wovens**

Types of defects

- Holes
- Thin spots
- Bubbles
- Contamination & gels
- Foreign particles
- Black specks
- Scratches
- Die lines
- Burst bubbles
- Repeated defects
- Insects
- Burns
- Folds

Technical data

- **Inspection range** from 100 mm
- **Camera**
  Principle: CCD line sensor
  2048 – 8192 pixels / camera
  max. 80 MHz data rate
- **Computer**
  Workstation: Embedded technology
  Server: Pentium technology
- **Illumination**
  HF-cycled, high-performance fluorescent light
  Cold-light illumination with cross section transformer
  For special applications UV or IR
- **Interfaces**
  Ethernet 10/100 M Base-T, digital and analogue I/O, Modbus, Profibus, RS232, SAP link, USB 1.1 and 2.0
- **Remote control**
  Extender: Ethernet
  Service: via ISDN, Internet
- **Software**
  Operating systems: WinNT4.0, Win2000, XP
- **Dimensions**
  Operator terminal: 0.6 x 0.8 x 2.0 m (W x D x H)
  Inspection bridge: from 0.5 x 0.4 x 0.1 m (L x H x D)
  Illumination: from 1.0 x 0.2 x 0.1 m (L x H x D)
- **Main power**
  Power supply: 230 V AC, 6 A / 115 V AC, 12 A
- **Temperature**
  10 – 40 °C without cooling

Benefits

- **Enhancement of the production process by direct intervention**
- **Increase of product quality**
- **Optimisation of material commissioning**
- **Reduction of customer complaints and returns**
- **Marking of the defect position for later review and sorting**
- **Creation of individual protocols**
- **Reduction of scheduled maintenance down-time (e.g. extruder cleaning)**
- **Reduced slitter scrap (for extruded, calendered and rolled products)**
- **Fast return on investment (ROI)**