WEB INSPECTION SYSTEM
FSP600
Clear visions and clear results
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FSP600

The Web Inspection System FSP600 allows the detection of every defect type which appears in film, converting and nonwoven productions.

With the OCS inspection system we guarantee a 100% surface control of transparent, opaque or coloured films with running speeds up to 1200 m/min and resolution starting from 25 µm, because any type of defects can reduce the web quality enormously. With this prevention of ongoing contaminated film during the running process the production performance is increased significantly.

NEW: MCE - Multi Channel Evaluation
The Multi Channel Evaluation is the fastest inspection concept with embedded (EMB) technology. It enables simultaneously detection with up to 6 channels with one and the same camera. One channel for reflection of surface defects, three additional channels for transmission (red, green and blue = RGB) and better detection and classification.

The images of detected defects are stored for further analysis with Fuzzy Logic and all defects can be classified according to customised defect classes.

Furthermore the easy teach-in function enables the operator to select and name the defect classes by evaluating the defect images. Then a classifier automatically determines the parameters for these classes.
Transmission and reflection LEDs as well as dark and bright field applications can be combined and work with up to 6 channels simultaneously. In order to detect critical defects such as streaks or scratches there is the possibility to control and trigger the LEDs sequentially. The LEDs can be delivered with passive cooling in red, white, blue, UV or IR wave length fulfilling IP54 (water drop protection).
FIELDS OF APPLICATION

- Cast, blown film and sheet lines (PP, PET, PE, ABS, PC, PMMA, etc.)
- Coating lines
- Calendering lines
- Bi-oriented stretch film lines
- Aluminium extrusion coating and lacquering lines
- Technical films
- Surface protection films
- Medical/pharmaceutical films
- Optical films
- Food/barrier films
- Hygiene/diaper/non-woven films and laminates
- Automotive films
DETECTABLE DEFECTS

- Gels
- Black specks
- Fish eyes
- Holes
- Wrinkles
- Scratches
- Coating voids
- Water drops
- Oil stains
- Insects
- Contaminations
- Bubbles
- Die lines
- Craters
TECHNICAL DATA

- Camera
  - CMOS line scan camera, dual line
  - Black and white or colored
  - Highest resolution
- MCE - Multi Channel Evaluation
  - Detection with up to 6 channels simultaneously with the same camera
- Operation running speed up to 1200 m/ min
- Inspection width 100 – 10,000 mm
- Open interface
  - Easy integration of external devices (e.g. colour measurement)
  - OPC-Server Industry 4.0
  - Easy data transfer to CSV

SOFTWARE

- Same statistical and analysis software as the polymer industry
- Process and material parameter integration
- Data management and validation software
- Slit optimisation (re-work manager)
PEST CONTROL ON ROLL
PCR3000

The Pest Control On Roll enables the producer to inspect the film on the roll in the winder and detect all kinds of insects, wrinkles and contaminations.

**PERFORMANCE CHARACTERISTICS**
- Inspection on the roll in the winder
- Detection of insects, wrinkles and contaminations
- Easy integration into existing winders
- Integration into the FSP600 software
- Also as stand-alone system usable
- OCS offline software (documentation, alarming, statistics and defect photo)
- Inspection width of up to 10 m
- Suitable for cast, blown, biax lines, laminators and slitters
MOBILE INSPECTION FRAME

The Mobile Inspection Frame enables the producer to inspect various lines with one FSP600 system. The portable frame provides a great flexibility and is a state-of-the-art troubleshooting unit e.g. in Biax lines.

TECHNICAL DATA

• Measuring principle transmission
• Inspection width from 400 mm – 1200 mm
• Production speed 600 m/min
• Resolution 100 µm – 300 µm (depending on desired inspection width and inspection speed)

SAMPLE TESTING

ST4

The Sample Testing system ST4 is an offline table unit analysing transparent and non-transparent surfaces (DIN A4/A5) such as plastics, steel, paper and textiles for irregularities and contaminations in a laboratory environment or R&D centres. The scanner also helps to adjust inline inspection systems for production regarding the defect detection feasibility, the resolution, the right inspection angle and lighting technology.

TECHNICAL DATA

• Camera resolution from 5 µm
• Lighting technology
  - High frequent fluorescent lamps with focus rod
  - High power Chip on Board (COB) Blue/white/red/infrared LEDs
• Transmission or reflection mode with various inspection angles
OCS WEB INSPECTION COOPERATIONS

Scores of well-known film manufacturers and companies of the converting industry trust in the excellent quality control of their products by OCS web inspection equipment.

The Windmüller & Hölscher KG exhibits the FSP600 system working in the blown film (width about 2800 mm) and cast film production in its pilot plant station. Furthermore they keep the mobile FSP frame available.

FSP600 TRAINING CENTRE

The OCS headquarters provide a factory-owned training centre, which offers courses for the professional use of the FSP600 system at regular interval dates. In order to use and configure the FSP600 system under real conditions in the future our expertise supports you during the training process. Furthermore prospective customers can provide us with samples for a detailed detection according to their specifications.

TECHNICAL DATA

- Measuring principle
  - Transmission mode (darkfield and brightfield) and reflection mode, LED scattering

- Lighting technology
  - Blue/white/red/infrared/UV LEDs

- Resolution from 50 μm – 200 μm

- Winder – core: 3” (76 mm)
  - Film width: 50 mm – 500 mm
  - Max. roll ø: 500 mm
  - Max. speed 400 m/min