

## Film inspection system

The Film Inspection System FIS 200 offers automatic inspection of aesthetic appearance and physical defects along and across the production direction based on the principle of image processing technology in real time.

FIS 200 allows immediate reaction to malfunctions and process irregularities. Its modular design enables individual and customized solutions and is proven with major producers in Europe.

The Film Inspection System FIS 200 offers online detection of holes, thin- and thick spots, cloudiness, optical density, homogeneity, dirt spots, contamination, printing defects, process drifts, etc. ...

Using a teach-in method, easily evaluation parameters for different products can be created, stored and recalled. Results are presented as graphs and as a quality map.

Plastic Films are mainly characterized by their area weight, thickness and visual appearance.

Deviations from standard values indicate changes or malfunctions in the production process which have to be corrected as quickly as possible. For final application or for further processing the films has to meet acceptance criteria to avoid interruptions in subsequent process stages, as well as defects in the finished goods.

Instead of the traditional manual methods, the best, most economic and efficient way is online monitoring of the films every day all year round.

### Specifications

- Modules for a high resolution and high speed camera inspection in the production line for the detection of physical defects and of aesthetic appearances in nonwoven web.
- 100% quality check of every produced batch with a printed and an electronic document describing defect type and location.
- Permanent process monitoring and alarm trigger at the detection of out-of-tolerance situations.
- Film inspection utilizing transmitted and/or reflected illumination with black and white or colour camera systems.
- Detection and classification of contaminations, coloured spots, dirt and similar visually unpleasant appearances.
- Adaptable to all types of material, web widths and production speeds by a modular hardware and software architecture.



### Benefits

- The Film Inspection System detects physical defects such as thin spots, thick spots, spills, streaks, wrinkles, holes, folds, ...
- The Film Inspection System detects aesthetic defects such as printing defects, colour spots, contamination, colour shades, ...
- The Film Inspection System permanently monitors the production process for drifts of the optical density, of cloudiness and streaks.
- The Film Inspection System is a strictly modular system, with a variety of illuminations, camera systems and software modules to give the best solution and the best value according to the large variety of nonwoven products.

## Technical specifications

### System configuration

- Modular inspection system for the inspection of any material and any colour
- Inspection of physical defects, printing defects and aesthetic appearance
- Camera modules with black and white or colour cameras
- Illumination modules for inspection utilizing transmission and/or remission
- Cluster of PCs for high inspection rates

### Dimensions

- Length: 700mm
- Width: Web width + 400mm
- Height: 2000mm

### Material

- Any film material transparent or coloured down to 6g/m<sup>3</sup>
- Scalable for any width and for any production speed

### Defects

#### **Physical defects:**

holes, thinspots, thick spots, cracks, folds, non homogeneities,...

#### **Aesthetical defects:**

contamination, printing defects, coloured spots, dirt, ...

### Process monitoring

- Optical density in cross and length direction
- Streakiness and cloudiness

### Software modules

#### **Inspection and sorting**

- Easy adjustable sorting parameters
- Imaging of defects
- On screen statistics

#### **Quality map:**

- Batch based documentation of defect type and defect location
- Quality grading of a production batch

#### **Process monitoring**

- Monitoring of any drift and deviation during production
- Alarm for serial defects
- Grading of defects

#### **Advanced statistics and remote control**

### Options:

- Large letter display
- Defect marking system
- Remote maintenance
- LAN integration
- PLC interface
- Field bus interfaces