



MECHATRONIK

# IVA WEB INSPECTION WIS1000 - SYSTEM

*Technology by IVA Vision, Belgium  
PROVIDING WEB INSPECTION SOLUTION  
SINCE 27 YEARS*

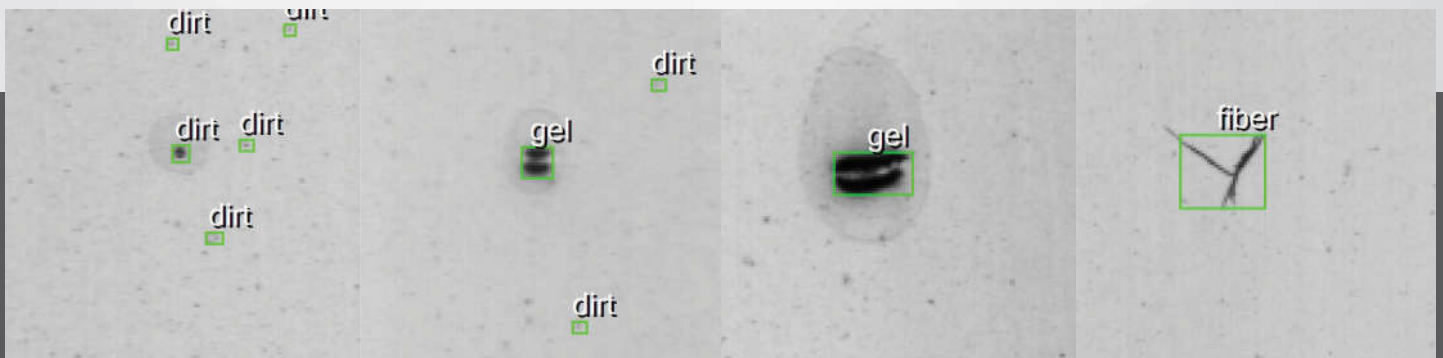
[www.sbi-iva.com](http://www.sbi-iva.com)

## ***Application areas include:***

- Plastic Film & Sheets
- Non-Woven
- Metallised Film
- Solar EVA Sheets
- Glass Sheet
- Coatings
- Cable & Tubes
- Textile

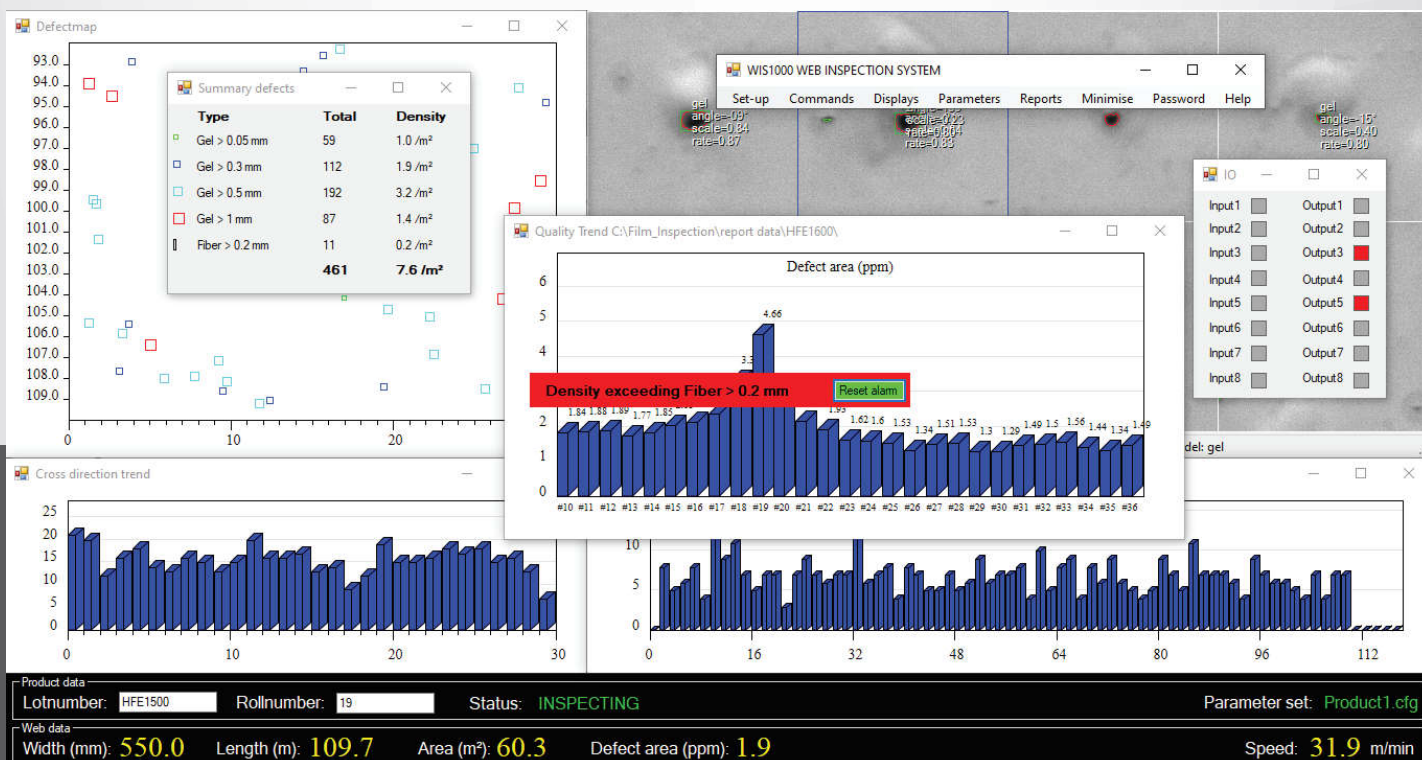
## ***Defect Detection:***

- Gels
  - Pin Holes
  - Tramlines
  - Wrinkles
  - Insects
  - Nonmetallized film areas
  - Unmelted Polymers
  - Dirt/Contaminations
  - Fibers
- and many more...



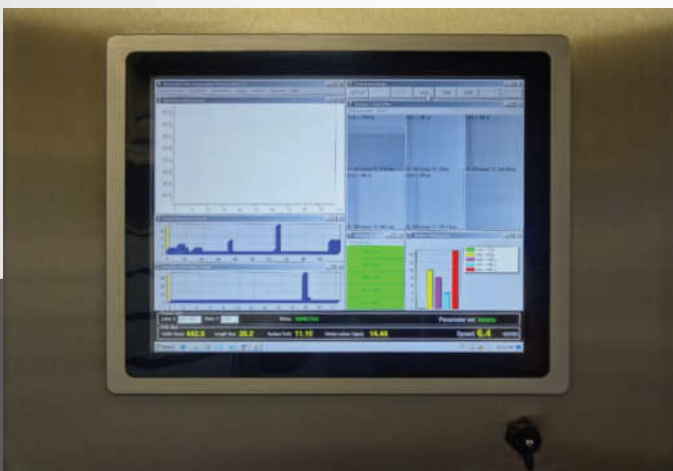
## Features:

- Inspected web width range from 10 mm to 10 m. (up to 16-line scan cameras, 8K pixels / camera)
- Web speeds up to 1000 m/min.
- Automatic gain control, flat field correction, automatic edge tracking and opacity control on all webs.
- Classification based on contrast, model recognition, width, length, surface and density measurements.
- Supports up to 32 user definable defect categories.
- Operates in transmission, reflection or any combination of any angles.
- Real time or distance delayed alarm outputs triggered on discrete defects or density exceeding (sheeter applications, tab throwers, spray markers).
- Defect data and images are visualised and stored in databases for review.
- Simple and user-friendly operator interface with password protected access levels and on-line item sensitive help.
- Remote control over network connection
- Excel-compatible data reports Database connection SQL — Access -oracle
- OPC connectivity (UA)



## *System Components:*

- Controller with Panel PC
- Digital line scan camera  
(up to 16 cameras can be connected)
- Multiple interfacing options
- Encoder system for length measurement
- VHO led tight source  
(Up to 8 light sources can be controlled)



## *System Software:*

The WIS1000 real time displays are available as separate sizable windows that can be combined freely:

- Running defect map
- Defect histogram & summaries
- Cross direction defect distribution trend
- Down web defect distribution trend
- Defect density alarms
- Defect imager ring buffer
- Status window
- Defect database explorer
- Live camera images
- Oscilloscope

## Defect Definition:

- Defects are defined with a simple formula, which makes it very easy to define different size categories.
- One or more model types can be selected to make a distinction between the different defect types.
- One can create as many model types as want to create.
- Each model type consists of a variable number of trained defect modes.
- The classification engine works consistent with a few trained models of each defect type
- Shorter training time and a fast but accurate defect classification.

DEFECT PARAMETERS
X

Select defect...

- Gel > 10 µ
- Dirt > 10 µ
- Gel > 40 µ
- Dirt > 40 µ
- Gel > 100 µ
- Dirt > 100 µ
- Gel > 200 µ
- Dirt > 200 µ
- Gel > 400 µ
- Dirt > 400 µ
- Fiber > 50 µ
- Fiber > 100 µ
- Fiber > 200 µ
- Fiber > 400 µ

Output parameters

Shape  rounded sq.

Colour Change colour

Drawwidth 140

Drawlength 140

Output channel 1

Defect map

Defect image on screen

Defect image to database

Repeat defect analysis

Density thresholds

Absolute mode

Warning level (/roll) 500

Alarm level (/roll) 100

Output channel 0

Insert Defect
Update

Add Defect
Cancel

Remove Defect

Defect definition formula

- Grayavg ^
- Graymin
- Graymax
- Grayvar
- Modeltype
- Modelqu
- Modelnr v

`( width>0.2 or length>0.2) and Modeltype = "gel"`

## Reports:

- **Roll summaries**

- start and stop times, roll nr, lot nr, length, width, ...
- defect data
- cross direction and machine direction trends

- **Detailed defect data**

- 2-D overview of the inspected roll with the defects and their exact location (colored shapes). The 2d-map and the defect images can be magnified.

- List with detailed information about the defect (click on a defect in the list or on the map) - Image of every defect (click on a defect in the list or on the map)
- The defects can be retested with other settings to see the effect on size, model recognition.

- Store to a library

- **Quality trends**

- Roll reports are grouped per Lot number and can be viewed together in one graph.

Defect review Lot HFE1500 - Roll 21 - 27-04-2021 23-08-51.dat

Type: **Gel > 1 mm**  
 Crossweb position: **94.1 mm**  
 Downweb position: **11.70 m**  
 Area (mm<sup>2</sup>): **1.379** Gray avg: **49.8**  
 Width (mm): **1.35** Gray min: **4**  
 Length (mm): **1.69** Gray max: **110**  
 W/L-ratio: **0.8** D/L-ratio: **999.0**  
 Model: **gel**

Gel > 0.05 mm	at 10.00 m
Gel > 0.3 mm	at 10.15 m
Gel > 0.3 mm	at 10.50 m
Gel > 0.3 mm	at 10.85 m
Gel > 1 mm	at 10.90 m
Gel > 0.3 mm	at 11.40 m
<b>Gel &gt; 1 mm</b>	<b>at 11.70 m</b>
Gel > 0.3 mm	at 11.70 m
Fiber > 0.2 mm	at 12.20 m
Gel > 0.3 mm	at 12.55 m
Gel > 0.3 mm	at 12.90 m
Gel > 0.05 mm	at 12.90 m
Gel > 0.3 mm	at 13.00 m
Gel > 0.5 mm	at 13.25 m
Gel > 0.3 mm	at 13.70 m

Model detection

Dark blob threshold: 100  
 White blob threshold: 255  
 Process

Process immediate  
 Show contours  
 Show bounding boxes  
 Show detected models  
 Show detected model data

Recognition rate (0-1): 0.8  
 Angle tolerance (°): 90  
 Scale factor (min.): 0.5  
 Scale factor (max.): 3  
 Model library: gel.bin

Dimensions

Pixel width (mm): 0.025  
 Pixel length (mm): 0.025  
 Min. defect distance (p): 20



SBI Mechatronik, with a long established history of making thickness measurement and control systems for the plastic industry, acquired IVA Vision, Belgium in May 2022.

With this acquisition SBI endeavours to serve its own and IVA customers with advanced defect detection capabilities in addition to its thickness measurement and control systems portfolio.

For more information please refer to:

[www.sbi-mechatronik.com](http://www.sbi-mechatronik.com)

[www.sbi-iva.com](http://www.sbi-iva.com)



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