ES150

Process Imaging for Continuous Web Processes

Steel Hot Strip Mill

Vinyl Embossing

Now available with 1024 datapoints per scan!

MP150 Linescanner

Float Glass Annealing Lehr

Raytek®

A Fluke Company

Web Process Imaging System

The ES150 System is an automated inspection system for detecting, measuring, and classifying thermal features and defects occurring in continuous web processes.

Benefits

- Detect thermal problems early
- Faster product changes and reduced setup time
- Automate quality monitoring
- Communicate with process control system via OPC
- Reduce scrap

Features

- Web temperature profile for more effective control
- Custom measurement sectors
- Product specific configurations or "recipes"
- On board Ethernet TCP/IP communication
- Compatible with PLC's or Excel, DasyLab, LabVIEW
- Automatic fail-safe alarm logging
- Optional analog and digital outputs for each sector
- Built-in laser sighting
- Software supports English, German, French, Finnish, Dutch and Italian languages

The ES150 Process Imaging System monitors continuous web processes

Using the MP150 Linescanner, the ES150 System provides an advanced capability for monitoring temperature distributions of moving webs. The ES150 System offers the flexibility to define and configure any number of measurement sectors.

Temperature Monitoring

The ES150 System provides the capability to define any number of sectors corresponding to specified areas across the web. Sectors are defined by name, location, and the desired processing of temperature data within the sector
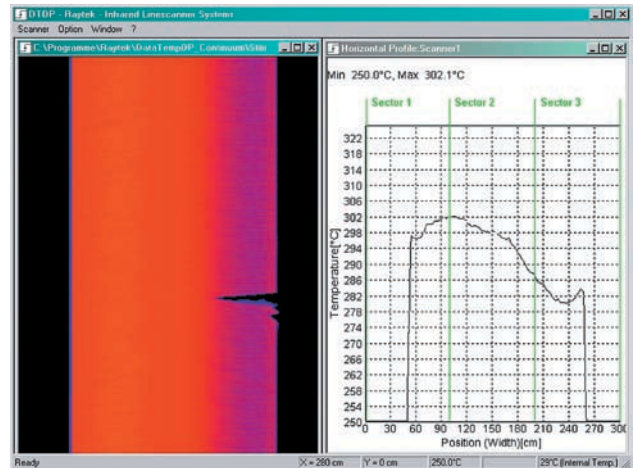
(e.g., average, minimum, or maximum temperature). For example, in sheet extrusion processes, sectors can be configured to provide temperatures corresponding to each die bolt.

The ES150 system continuously monitors the web process allowing temperature data to be visualized as a line graph (profile) and a thermographic image. Profiles and images may be printed or archived for analysis.

Through the use of OPC (OLE for Process Control), the ES150 system acts as an OPC server and communicates with many common process control systems. This feature allows the ES150 to move beyond being just a measurement tool and becomes an integral part of the total process control system.

300 lines

Alarm

200 lines
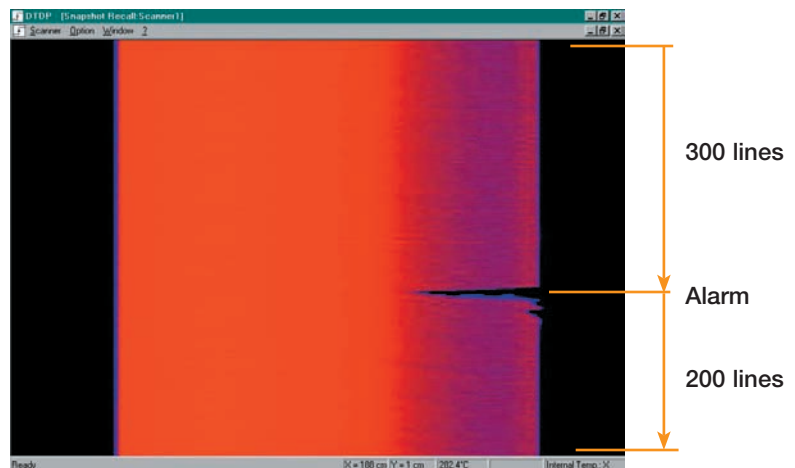
Alarm Documentation

In case of an alarm, the associated thermal image is automatically saved indicating the date, time, alarm duration, and the defect position. When an alarm "event" occurs, 500 temperature lines are automatically stored in an alarm log file.

ES150 Applications

The ES150 System supports a broad range of industrial applications.

Plastics
Sheet & cast film extrusion
Web embossing
Plastic & rubber belt production
Blown film
Vinyl calendering
Print drying
Void & hole detection

Metals
Hot strip mills & rolling mills
Continuous casting steel & aluminum
Torpedo car refractory
Ladle refractory
Sintering beds
Small parts heat-treating
Painting & coating

Paper
Coating & laminating
Drying
Corrugated cardboard drying

Building Products
Vinyl flooring
Wallboard
Ceiling Tile
Asphalt Roofing Shingles

Combustion prevention and hot spot detection
Fiberglass batting & glass wool
Tobacco processing

Flat & float glass production
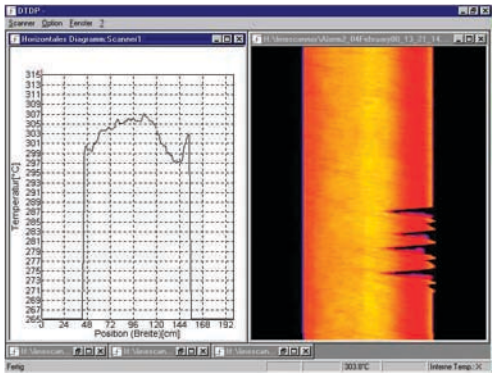Tin bath exit
Annealing lehrs
Tempering, bending, and forming

Other
Automotive paint booths
Food processing
  (chocolate, corn chips)
Latex carpet backing

Automate quality monitoring

MP150 Models

MP150 models are available with a choice of temperature and spectral ranges.

| Model Number	Temperature Range	Accuracy	Spectral Range	Typical Applications
RAYTMP150LT	20°C – 350°C (68°F – 662°F)	±2°C (4°F)	3–5 µm	General Purpose
RAYTMP150MT	100°C – 800°C (212°F – 1472°F)	±3°C (6°F)	3.9 µm	Heat treating, ore processing
RAYTMP150G5	100°C – 950°C (212°F – 1742°F)	±0.5% of measured value or ±3°C (6°F) whichever is greater	5 µm	Glass laminating, bending and forming
RAYTMP150P30	30°C – 250°C (86°F – 482°F)	±3°C (6°F)	3.43 µm	Plastic extrusion, laminating and converting
RAYTMP150P31	100°C – 350°C (212°F – 662°F)	±3°C (6°F)	3.43 µm	Plastic extrusion, laminating and converting
RAYTMP1501M	600°C – 1200°C (1112°F – 2192°F)	±0.5% of measured value or ±3°C (6°F) whichever is greater	1.0 µm	Hot strip mills, plate mills, and continuous casting
RAYTMP1502M	400°C – 950°C (752°F – 1742°F)	±0.5% of measured value or ±3°C (6°F) whichever is greater	1.6 µm	Hot strip mills, plate mills, and continuous casting

ES150 System

RAYTES150XXX

MP150 Linescanner
DataTemp ES150 Software
Industrial power supply
RS232/485 Converter
RS485 and Ethernet cables

ES150/MP150 Specifications

Ambient Temperature	0 to 50°C (32 to 122°F)
Field of View (FOV)	45° or 90° (selectable)
Number of Temp. Points	256 points @ 150Hz 512 points @ 80 Hz 1024 points @ 40Hz
Scan Rate	Up to 150Hz
Accuracy	See MP150 Models
Physical Dimensions	200 x 180 x 190 mm (7.9 x 7.1 x 7.5 in)
Weight	7 kg (15.5 lbs)

Options and Accessories

Part Number	Description
XXXTMP50ACCC	MP50 carrying case
XXXTMP50485CB10	10m RS485 cable extension
XXXTMP50PSCB10	10m Power cable extension
XXXTMP50ETH10	10m Ethernet Cable
XXXMP50ACMP	Mounting plate for adjustable mounting base (or tripod)
XXXTMP50ACRMB	Adjustable mounting base
XXXSYS16DA	Digital Output Module (16 channel, open collector)
XXXSYS4AA	Analog Output Module (4 channel, mA or V)
XXXSYS485CV	RS232/RS485 Converter (needed for output modules)

*Optional
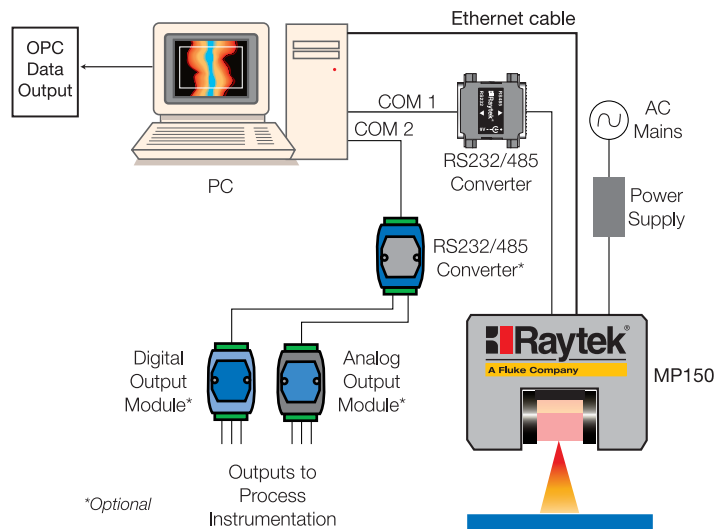
Easy Installation

The small size of the MP150 Linescanner allows for easy installation. The MP150 connects to a standard PC operating Windows® NT4 or Windows® 2000. The system's RS485 digital interface insures reliable operation over long cable runs. The diagram below represents a typical system installation. Optional analog and digital (open collector) output modules operate from a second serial COM port on the PC. The PC never has to be opened to install the ES150 System.

The Worldwide Leader in Noncontact Temperature Measurement

www.raytek.com

Raytek is an ISO 9001 certified company

CAUTION
LASER RADIATION • DO
NOT STARE INTO BEAM
OUTPUT < 1mW
WAVELENGTH: 635 nm
CLASS II LASER PRODUCT

nqa.
ISO 9001
Registered

ANAB
ACCREDITED