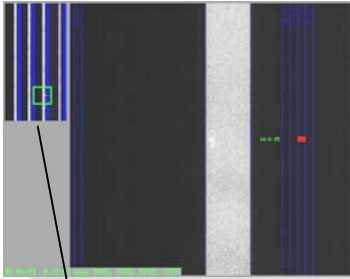


SIGNUM

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Display of a light error

Overview screen with 4 strips

surface inspection of aluminium strips

Application Fields

Inspection of:

- Surface defects
- Coating defects
- Holes, Cracks
- Dimensional accuracy

In-Line inspection for “endless” production of flat materials
e.g. extrusion profiles

Main Features

Line cameras generate continuous images of the surface which are analyzed in a procedure customized for surface inspection.

For fluctuate position or widths the inspection windows are readjusted through automatic detection of edges. Width measurement is included.

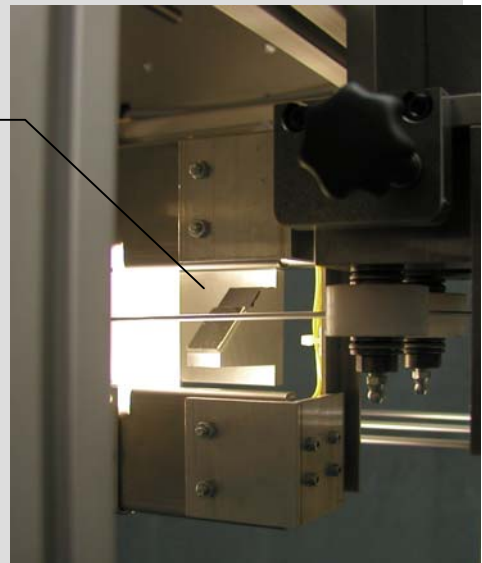
The number of line cameras to be used depends on profile number and width as well as number of views (top, bottom, left, right).

At an existing facility processing 8 strips with 4 views each, the images of 20 line cameras are analyzed simultaneously. 245 MByte/s data are being processed at a resolution of 0,16 mm/Pixel at 2,5 m/s. Fault detection is supported by task-specific illumination arrangements.

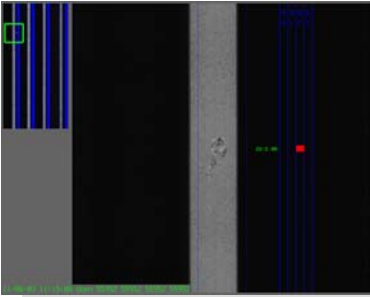
Parameters allow the user to adjust the system to different profile types; even mixed variants are possible. Quality criteria may be determined by the user specifying thresholds for contrast and defect size for each strip, even during operation.

Detected surface defects are displayed onscreen, forwarded to a marker device and listed in a coil statistics file.

side inspection via tilted mirror



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Display of a large defect on strip #1

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Inspection System

- Networked PCs with Windows operating system
- Connection of multiple line cameras capable of simultaneous image acquisition
- Distributed image acquisition with special illumination arrangement
- Rotary encoder evaluation and precise marker control
- Opto-isolated digital interface cards for communication to facility PLC
- Ethernet access for log files and data storage

Image acquisition stations for upper side and bottom side of all 4 strips (left) and the first station with the side inspection of strip #1 (right).



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Computer für Signalverarbeitung
und Mustererkennung GmbH
Rüdesheimer Str. 21
D-80686 München
Tel: 089/547055-0
Fax: 089/574583
email: sales@signum-vision.de

