



## CCS Pinhole Detector

The IMS pinhole detector is ideal as high-performance solution especially for rolling mills and processing lines (e.g. for aluminum, copper and steel).

The measurement method is based on the detection of finest quantities of light by CMOS photo sensors. In this

way, the CCS pinhole detector reliably detects, locates and classifies even the smallest perforations that can occur in the production of strips and foils.



### Measuring Task

- detection of pinholes
- optional:
  - strip edge fault detection
  - large hole detection
  - width measurement
  - dynamic performance monitoring

### Special Features

- reliable IMS hardware ensures long-lasting and low-maintenance operation in a compact and lightweight construction
- multiple classes for pinholes and detection of larger holes
- intelligent, water-cooled, high-performance light source with intensity control
- automatic dirt detection and corresponding warning
- reliable detection, localisation and classification
- online visualisation of the results and reporting via user-defined results interface
- optional: IMS calibration master

### Material data

Typical thickness range:	up to 0.1 mm, but not limited
Max. speed:	up to 1,500 m/min, but not limited to
Width:	up to 2,400 mm, but not limited
Length:	not limited / continuous inspection

### Measurement system data

Gauge type:	fixed mounted frame or moveable C-frame
Radiation Source:	intelligent high-power LED backlight (water-cooled)
Camera type:	CCS (16 cameras per cluster)
Typical working distance camera:	90 mm
Typical working distance backlight:	100 mm

### Measuring dynamics

Sampling rate:	up to 28 kHz
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### Measuring accuracy

Pinhole size (diameter):	5 $\mu\text{m}$ (in foils) <sup>**1)</sup> 10 $\mu\text{m}$ (in strip) <sup>**1)</sup>
Edge blackout:	$\leq \pm 3$ mm (no mechanical edge masks)
Pinhole position detection accuracy:	1 mm in strip cross direction
Max. permitted passline fluctuation:	$\pm 3$ mm

<sup>\*\*1)</sup> The detectable hole size depends on the strip thickness and strip speed. Exact details are specified on a system basis.