

XR SSMC Multichannel Thickness Profile Measuring System with integrated Surface Inspection System

The XR SSMC multichannel thickness profile measuring system with integrated surface inspection system combines precise thickness measurement and advanced surface inspection in one system.

It measures the strip thickness and thickness cross profile continuously in real time and detects even the smallest of defects on the surface of the material. The strip thickness is determined by ionisation chambers,

which detect the residual radiation generated by the x-ray tube and convert it into electrical signals. At the same time, the surcon 2D system ensures precise surface inspection, even under demanding conditions. A high-performance HMI ensures that the most important measurement results are available at all times.

This compact system is ideal for space-constrained environments and sets new standards in quality control.



### **Measurement Task**

- continuous thickness measurement in the centre of the roller table
- continuous measurement of the strip thickness cross profile
- measurement of the width and centreline deviation
- Calculation of the wedge and crown values
- fastest and complete cross profile measurement compared to other measuring systems with cross profile function
- guarantee of continuous centreline thickness measurement

## **Special Features**

- c-frame with customisable dimensions
- optionally available with integrated temperature measurement - proven IMS technology for x-ray high-voltage generators and ionisation chambers (detectors)
- apply surface inspection to each processing step for

- stereoscopic design and thus detection of the cross contour influence
- 100% online inspection with fast line scan cameras and high-power LEDs
- advanced automatic defect detection at various illumination angles
- immediate detection of periodic defects indicating roll damage

- conclusive root cause analysis
- online visualisation of results and report generation via customised results interface
- integrated quality management tool create your own rules for instant evaluation of surface quality

# Material Data

Typical thickness range:	> 0 up
Speed:	> 0 - 1
Width:	up to 3

## Measuring System Data

Gauge type:	c-fram
Radiation source:	X-ray t
Configuration:	2D brig
Camera type:	CMOS
Illumination source:	High P more tl

#### **Measuring Dynamics**

Analogue time constant:	approx
Cycle time data processing:	10 ms
Cycle time data output CL:	10 ms
Cycle time data output profile:	adjusta

#### Measuring Accuracy

Reproducibility:	≤ 0.07%
Linearity:	≤ 0.05 0
Long term drift (10 hrs):	≤ 0.1 %
Statistical noise (10 ms):	≤ 0.1 %

## Performance Data

Typical resolution:	0.2 mn
Typical resolution.	0.2 1111

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#### THICKNESS MEASURING SYSTEMS FOR ALUMINIUM HOT ROLLING MILLS

to 40 mm

2 m/s up to 1,900 m/min for 0.4 mm length resolution

3,000 mm

ube (75 kV/2.5 mA) adaptable

aht field

line scan camera / Gigabit Ethernet / Camera Link

Power LED 450 nm / 630 nm / white han 500 W/m<sup>2</sup> at 500 mm working distance

. 20 ms

ble scanning time

m x 0.2 mm / 0.2mm x 0.4 mm