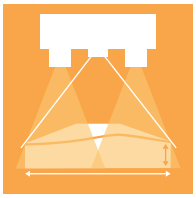


XR SSMC

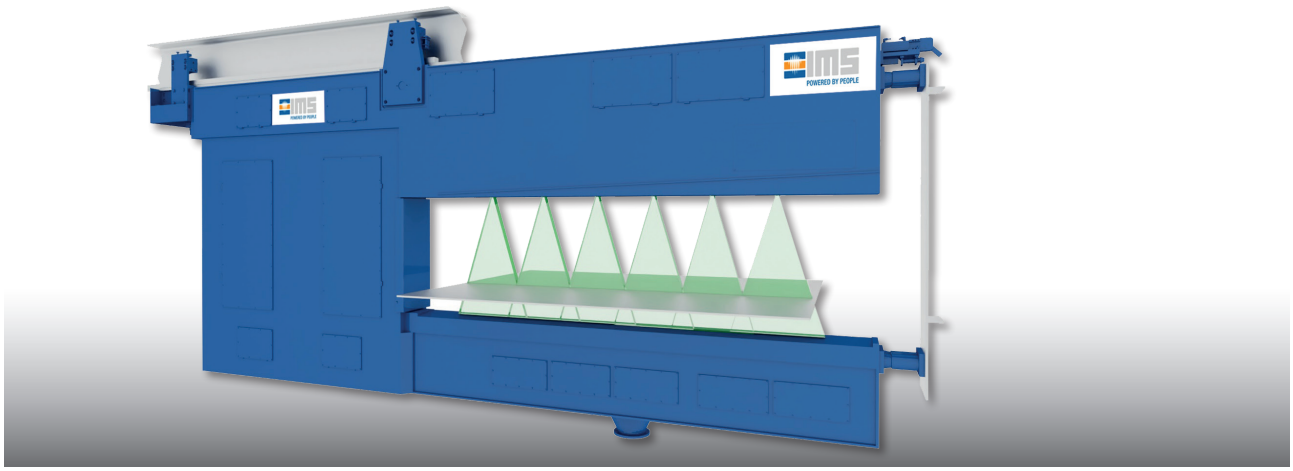
Multichannel Thickness Profile Measuring System

The XR SSMC multichannel thickness profile measuring system measures both strip thickness and the strip thickness cross profile continuously and in real time.

To this end, the C-frame is equipped with a series of segments, each consisting of a radiation source in the upper beam and a width-dependent number of detectors in the lower part of the frame, each forming a measuring channel. In this system the radiation passes through the material from top to bottom.

The ionisation chambers (detectors) convert the radiation which has passed through the material into electrical signals, which are then used to calculate the exact thickness of the material.

The centre gauge supplies the data for control (AGC) of the mill stand. The other detectors supply the profile data for calculation of the important wedge and crown values.



Measurement Task

- continuous thickness measurement in the centre of the roller table
- continuous measurement of strip thickness cross profile
- measurement of width and centreline deviation
- calculation of wedge and crown values
- fastest and continuous cross profile measurement
- compared to other measuring systems with cross profile function
- continuous guarantee of centreline thickness detection
- stereoscopic design and thus detection of the cross contour influence

Special Features

- c-frame, narrow construction
- all measuring points in one line across the strip
- optionally available with integrated temperature measurement
- x-ray high voltage generator:
  - made by IMS Messsysteme GmbH, Germany
  - compact system, easy installation
  - constant x-ray high voltage, no standard magazine required
- maintenance-free high voltage cables
- ionisation chambers (detectors):
  - made by IMS Messsysteme GmbH, Germany
  - pluggable design
  - no separate cooling necessary
  - mechanically highly resilient
  - very long service life
  - excellent stability (drift behaviour)
  - redundancy when using multiple detectors

Material Data

Typical thickness range:	> 0 up to 40 mm
Speed:	> 0 - 12 m/s
Width:	up to 3,000 mm

Measuring System Data

Gauge type:	c-frame
Radiation source:	X-ray tube (max. 75 kV/2.5 mA)

Measuring Dynamics

Analogue time constant:	approx. 20 ms
Cycle time data processing:	10 ms
Cycle time data output CL:	10 ms
Cycle time data output profile:	adjustable scanning time

Measuring Accuracy

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