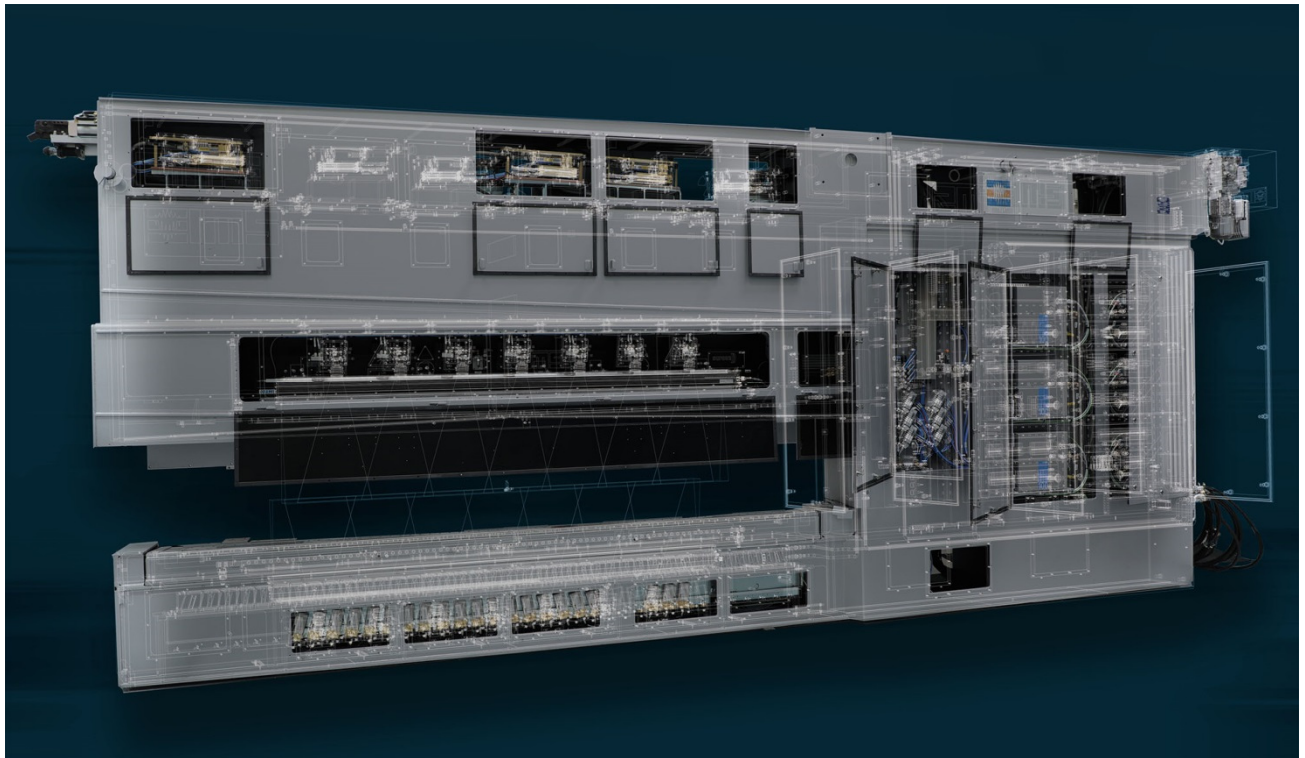


## Press release

# XR SMC multichannel thickness profile measuring system with integrated surcon 2D surface inspection system sets new standards in steel hot mills

*Heiligenhaus, NRW/Germany, 07 April 2025 – A precise thickness profile measurement of steel strips and an efficient surface inspection are decisive for constantly high product quality. They help to minimise the rate of rejects and reduce customer complaints. Existing rolling mills, however, often lack space for both systems to be integrated as independent solutions.*



**Figure 1** (Source IMS Messsysteme GmbH): XR SMC Multi-Channel Thickness Profile Measuring System with LasCon and integrated surcon 2D Surface Inspection System

Often, space in rolling mills is scarce. At the same time, quality requirements are continuously increasing so that additional measuring, detection and inspection systems are required to check and fully document the material parameters.

## Two systems in one housing: XR SMC multichannel thickness profile measuring system with LasCon and surcon 2D surface inspection system

As the first manufacturer of the industry IMS Messsysteme GmbH offers steel hot mills an x-ray based multichannel thickness profile measuring system with integrated 2D surface inspection system. This innovative system combines the thickness profile measurement with the surface inspection of the strip top side in just one housing.

The inspection system for the strip bottom side is provided in a mechanically separated way, as it is usually installed further away from the last roll stand. This space-saving solution enables mill operators that already use a thickness profile measuring system but lack space to accommodate a separate surface inspection system to efficiently fulfil both measuring tasks.

## Comprehensive measuring functions at a glance

The system fulfils the following measuring tasks:

- Continuous thickness measurement in the centre of the roller table
- Continuous measurement of the strip thickness cross profile
- Optional flatness measurement with integrated laser contour measuring device (LasCon)
- Measurement of the width and centreline deviation
- Calculation of the 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

- 100% online inspection with high-performance LEDs and fast line scan cameras
- Extended automatic defect detection in different illumination angles
- Instant detection of periodic defects that indicate potential roll defects



**Figure 2** (Source IMS Messsysteme GmbH): 100% online inspection with high-performance LEDs and fast line scan cameras

## Bespoke technology with unique features

The XR SMC multichannel thickness profile measuring device with integrated surcon 2D surface inspection system is captivating not only with its comprehensive measuring functions but also with the following special features:

- Customisable C-frame dimensions
- Optional integration of a temperature measurement
- Established IMS technology for X-ray high-voltage generators and ionisation chambers (detectors)
- Flexible application of the surface inspection in various processing steps for root-cause analysis

- Online visualisation and report generation via an adjustable interface
- Integrated quality assessment tool: Define your own rules for instant assessment of the surface quality

Thanks to this combination of compact design, state-of-the-art technology and versatile functions the system provides a future-proof solution for rolling mills where highest quality standards must be met but space is limited.

## About the company

Since 1980, X-ray, isotope and optical measuring systems of the globally leading producer IMS Messsysteme GmbH ensure highest product quality in the production and processing of steel, aluminium and non-ferrous metal.

The impressive portfolio of high-precision, perfectly coordinated and customisable measuring systems is worldwide unique in this scope; our solutions substantially contribute to optimised process sequences, increased output, reduced scrap rates and thus an economical, profitable and more environmentally compatible production.

Today, more than 4,500 non-contact IMS measuring systems are an integral part of the production equipment of hot mills, cold mills, process lines, plate mills, long-product rolling mills and tube rolling mills as well as metal service centres

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