

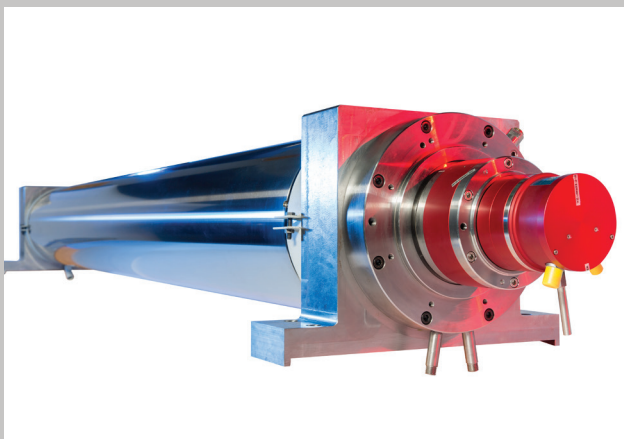


SMS  **group**

PRODUCT FACT SHEET

X-SHAPE

Reliable and precise flatness measurement and control



Our reliable and precise X-Shape flatness measurement system, which uses the latest generation of measuring rollers, meets all the requirements for high-quality production of hot and cold rolled strip.

For quality inspection and as an input variable for the flatness control system, our measuring system determines the actual flatness, taking into account strip tension and rolling speed.

ADVANTAGES OF PRODUCT

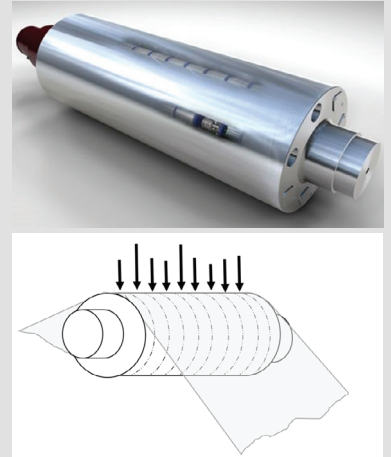
- › Robust flatness control, scalable for all plant types and available control elements
- › Mark-free measurement thanks to a closed surface
- › Reliable and wear-free signal transmission
- › Measurement capability for up to 3,000 mm strip width, with a maximum of 96 sensors and variable measuring zone width
- › No re-calibration required
- › Selectable roll surface finish: hardened and coated (tungsten carbide)
- › Model-based signal evaluation: one system applicable for all products
- › Increased productivity thanks to highly dynamic control
- › Independent system that can be used in new plants or retrofitted to existing installations.



Product highlights

MEASURING PRINCIPLE

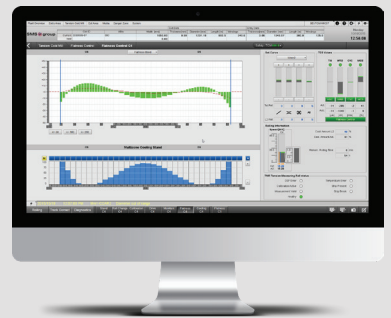
Measurement using X-Shape rollers uses BFI (Betriebs-Forschungs-Institut) technology. Force sensors are embedded into a measuring roller body through axial bores, ensuring their secure placement. Sensor positioning and the width of the measuring zones can be adjusted according to the strip width. These highly sensitive sensors are capable of detecting even the slightest changes in strip tension across the width of the strip. The process involves assessing the radial force components attributed to strip tension. The distribution of strip tension is a critical indicator of the product's flatness. In addition, the use of axial bores is a deliberate design choice to maintain the integrity of the roller surface, which helps to prevent any marks on the strip surface during operation.



INTEGRATED CONTROL CONCEPT

Our flexible and integrated flatness control concept provides various technological solutions designed to minimize flatness deviations (also known as orthogonal functions and actuator functions). The standardized communication concept facilitates easy integration, even with existing automation solutions.

With our X-Shape flatness measurement and control, we offer a complete system that is perfectly tailored to match process requirements. As part of the X-Pact® family of solutions for electricians and automation, this technology not only maintains, but also improves the productivity and product quality of our customers' plants.



Contact details

Feel free to use our contact form for questions, inquiries or personal contact:
<https://www.sms-group.com/x-shape>