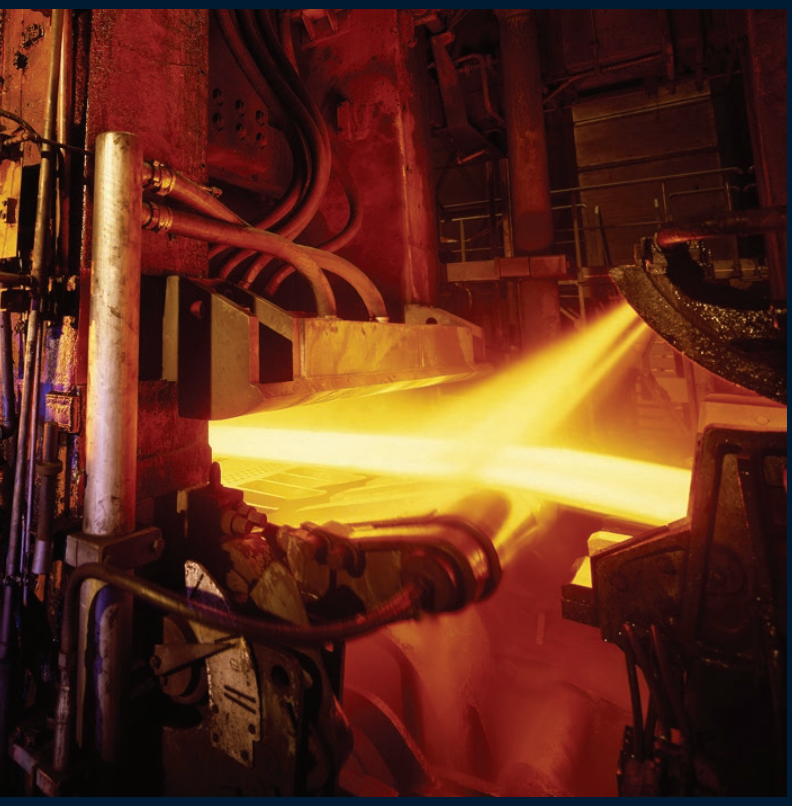
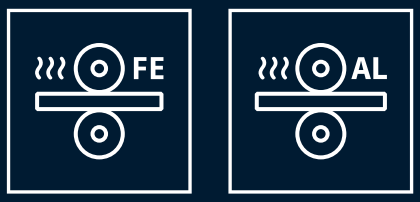
IMS
POWERED BY PEOPLE

TECHNICAL SPECIFICATION

Force Measurement
StripKraft Looper









StripKraft Looper

The IMS StripKraft Looper is a high-accuracy force measurement device developed for installation between finishing stands in hot rolling mills.

Designed in accordance with the highest engineering standards, it measures the force applied to the looper roll directly and provides a reliable real-time signal for strip tension control, process monitoring, mill protection and productivity optimization.
Direct measurement of looper force enables faster and more accurate determination of strip tension than estimates based only on actuator force and looper-arm position.

This supports improved control of strip thickness and width, reduced strip breaks and increased rolling-mill efficiency.

Utilizing advanced strain gauge technology and a robust mechanical design, all IMS load cells deliver stable performance under the severe operating conditions typically found in rolling mills, including high mechanical loads, vibration, temperature variations, and environmental contamination.

The dimensions of the IMS StripKraft Looper are individually tailored according to customer requirements.

Key Advantages

- precise strip tension measurement with high measuring accuracy, excellent repeatability, and long-term stability
- fast dynamic response for rapidly changing process conditions
- sealed, mill-duty construction for exposure to dirt, dust, liquids, steam and corrosive environments
- sealed construction provides reliable operation in environments exposed to water, oil, dust and scale
- high resistance to vibration, shock loads and mechanical stress
- long service life and low maintenance requirements
- easy integration into new and existing rolling-mill automation and control systems

Typical Applications

- inter-stand strip tension control in hot finishing mills
- Looper position optimization
- flat and long products
- automatic gauge control and related process-control functions

Specifications

Nominal measuring range	0.5 – 100 kN
Maximum excitation voltage	≤ 15 VDC
Nominal resistance of strain gauge bridge	700 Ω
Nominal sensitivity	0.5 mV/V
Repeatability	≤ ± 0.05 % of full scale output
Linearity	≤ ± 0.1 % of full scale output
Hysteresis	≤ ± 0.1 % of full scale output
Deflection	≤ 0.03 mm at nominal load
Thermal zero drift	≤ ± 0.008 % / °C (20 °C ~ 100 °C / 68 °F ~ 212 °F)
Insulation resistance	> 2 GΩ
Operating temperature range	-10 ~ +100 °C (optionally 150 °C / ~ 302 °F)
Limit load	1,000 % of nominal load
Breaking load	1,200 % of nominal load
Degree of protection according to EN60529 (IEC529)	IP67

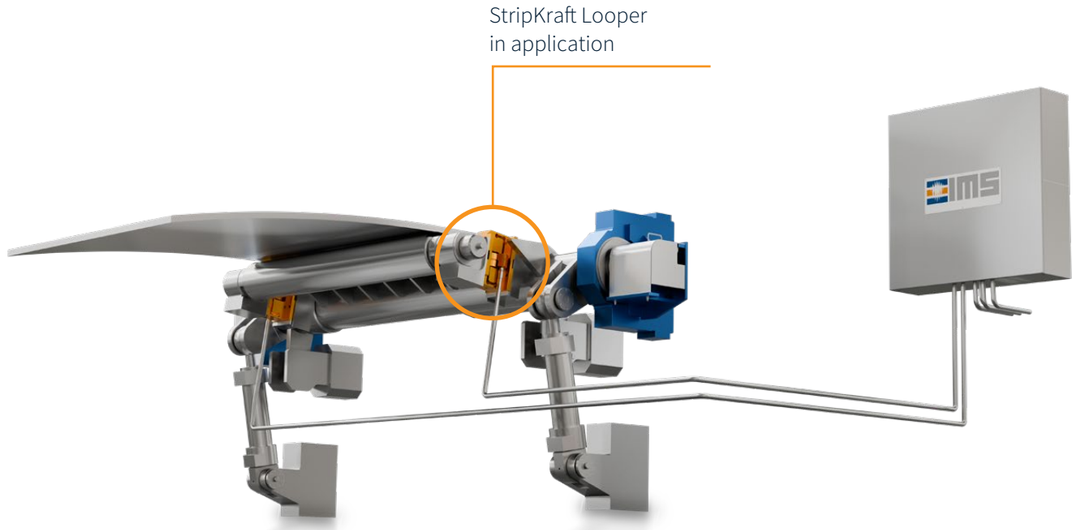
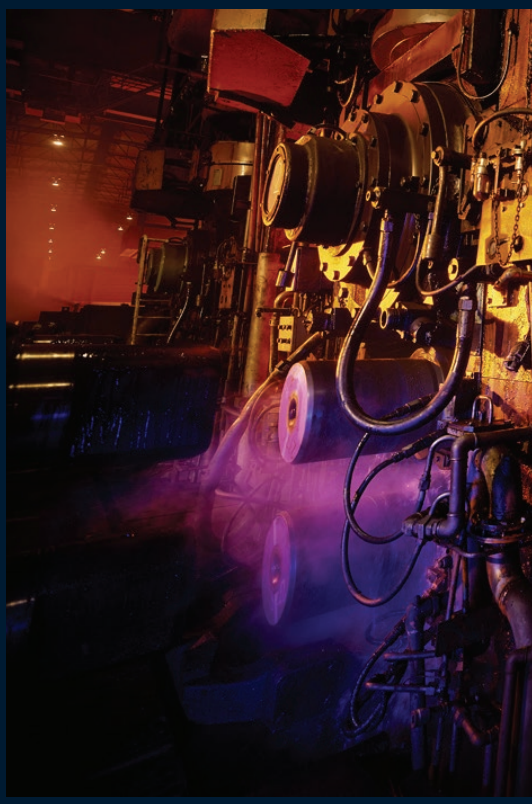


Figure 1: *Illustration of Interstand Looper equipped with StripKraft Looper and StripKraft Controller (MMV) in application*





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