

nGauge

What sets the nGauge apart is its role as the ultimate input for AGC systems. In a rolling mill, the AGC uses thickness deviation signals to adjust roll gap in real time, ensuring consistent product quality.

The nGauge's millisecond-level response time — a calculation period as fast as 1 ms — makes it the ideal partner for closed-loop control, enabling producers to meet tight tolerances with minimal waste.

The nGauge is engineered for 24/7 continuous operation in harsh mill environments, withstanding heat, scale, and vibration. Its digital architecture, unified under a single software platform, manages data from multiple sensors and technologies, simplifying integration and maintenance.

The system also features digital calibration standards that allow fast, automated setup and standardization, reducing downtime and operator error.



GAUGE SPECIFICATIONS

④ MEAN RESPONSE TIME

"The mean time after a step variation in the measured quantity until the output signal reaches a specified percentage of its final mean value for the first time. For this standard, 63.2% of the step change shall be the specified percentage." (IEC 1336, 1.3.24.1)

Response Time
 $< 2\text{ms}$ per Test Point A (IEC 1336, 1.3.7.1)

④ STATISTICAL NOISE

"Variation of the output signal under reference conditions, while all influence quantities are held constant and the detector is in an irradiated condition." (IEC 1336, 1.3.22)

Statistical Noise
 $\pm 10\text{mS}$ the 2σ variation = $\pm 0.12\%$

④ ACCURACY

"Degree of conformity of an indicated value to a recognized standard value, or ideal value." (IEC 1336, 1.3.14)

In the case of Thickness Gauges, the standard value is usually a precision master (internal or external) on which the gauge has been standardized. Accuracy is usually expressed as a percentage of the nominal thickness being measured.

Accuracy
 The accuracy $2\sigma = \pm 0.1\%$, not better than $\pm 0.2\mu\text{m}$

④ DRIFT

Drift is expressed as a percentage of the nominal thickness being measured.

Short Term ~1 hour
 $\leq \pm 0.05\%$ from the set thickness,
 not better than $\pm 1\mu\text{m}$

Long Term ~8 hours
 $\leq \pm 0.1\%$ from the set thickness,
 not better than $\pm 2\mu\text{m}$

④ REPRODUCIBILITY

"Closeness of agreement among a number of consecutive measurements of the gauge output signal for the same input and under the same operating conditions." (IEC 1336, 1.3.15)

Reproducibility
 $\leq \pm 0.1\%$ from the set thickness,
 not better than $\pm 5\mu\text{m}$

Repeatability
 $\leq \pm 0.05\%$ from the set thickness,
 not better than $\pm 1\mu\text{m}$

④ LINEARITY

"The closeness to which the actual calibration curve approximates a straight line." (IEC 1336, 1.3.26)

Linearity
 $\leq \pm 0.05\%$ from the set thickness,
 not better than $\pm 1\mu\text{m}$

- ④ INDUSTRIAL PLC-BASED DESIGN
- ④ VARIETY OF PLC OPTIONS
- ④ RITTAL CABINET