



Kr Coating Weight Measuring System

The Kr coating weight measuring system is used for continuous, non-contact measurement of coating layers using the isotope-based backscatter method.

The traversing measuring system measures the individual coat layers (primer & finisher) over the entire strip width.

The number of measuring heads required depends on the type of application (wet or dry).

To this end, the characteristic properties of different types of coating can be stored in a database.



Measurement Task

- coating thickness measurement
- quality control
- coating database
- coating layer control (optional)

Special Features

- quick and accurate measurements
- high reproducibility of measured values
- modular measuring head
- low maintenance costs
- highest availability
- fast return of investment
- savings in production costs (lower paint consumption)

Material Data

Carrier material:	Aluminium
Thickness carrier material (aluminium):	0.2 up to 3 mm
Width:	600 up to 2,100 mm
Coating material:	lacquers (epoxy, acryd, acrylate, acrylic, polyester, polyurethane, HDP, PVDF, plastisol, clear lacquers)
Typical coating area:	5.0 – 400.0 µm (dry)

Measuring System Data

Gauge type:	traverse with one measuring head (traversing)
Radiation Source:	Kr-85 spotlight activity from 7.4 GBq
Detector type:	KG 90
Measurement spot size:	Ø 120 mm
Typical working distance:	approx. 30 mm
Traversing speed:	0.5 up to 8 m/min

Measuring Dynamics

Sampling rate transmitter:	10 ms
Measuring time constant (analogue) TCA:	200 ms
Total time constant:	200 - 2,000 ms (adjustable)
Measured value output and processing:	10 ms

Measuring Accuracy (2 Sigma Values)

Short-term drift, 4h (IEC 61336):	≤ ± 0.2%, not better than ≤ ± 0.1µm
Reproducibility:	5 – 25 µm coating thickness ≤ ± 0.3 µm 25 – 50 µm coating thickness ≤ ± 0.5 µm 50 – 100 µm coating thickness ≤ ± 1.0 µm 100 – 200 µm coating thickness ≤ ± 2.0 µm 200 – 400 µm coating thickness ≤ ± 4.0 µm
Statistical noise (2σ) : (effective time constant) TCE = 2.000 ms, TCE=TCA+TCD)	5 – 25 µm coating thickness ≤ ± 0.1 µm 25 – 50 µm coating thickness ≤ ± 0.2 µm 50 – 100 µm coating thickness ≤ ± 1.0 µm at 100.0 – 200.0 µm coating thickness at 200.0 – 400.0 µm coating thickness