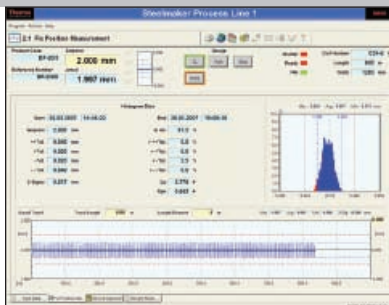


The Thermo Scientific strip thickness gauges provide reliable, accurate non-contact thickness measurement of flat sheet metal in every type of processing line. With their compact design and superior performance, these gauges are the perfect choice when you need a durable, reliable thickness gauge at an affordable price.

Thermo Scientific RM 100 EM and RM 110 EM Strip Thickness Gauges



Features

- Reliable, proven sensors
- Easy to use operator's terminal
- C-frame with electric drive
- Mill-mounted or C-frame-mounted configurations

Applications

- Pickling lines
- Annealing lines
- Shearing and inspection lines
- Slitting lines
- Cut-to-length shearing lines
- Entry or exit gauge for coating lines

Thermo Scientific strip thickness gauges demonstrate excellence in non-contact thickness measurement. The systems offer a user-friendly operator's interface, good functionality and robust frame construction designed to withstand the most demanding industrial conditions.

Measuring Unit

The Thermo Scientific RM 100 EM system includes a sensor head with a gamma-ray source that is ideal for measuring the thickness of process-line steel products. The sensor is housed in an industrial, heavy-duty C-frame for centerline measurement to provide reliable data. For increased measuring performance, the Thermo Scientific RM 110 EM utilizes an X-ray measuring head instead of the gamma-ray measuring head. All measuring heads are designed to operate with minimum maintenance in challenging environments. Both systems use high efficiency, ionization-chamber-based radiation detectors for excellent measurement stability. The gauges measure the centerline thickness as well as the cross profile in the optional scanning mode.

Operator's Interface

The operator's interface runs from a Windows®-based PC and can be positioned in a variety of locations at and around the mill. Configurable to many local languages, the typical installation includes a PC with mouse and keyboard which is ideal for the placement in the operator pulpit. Operator station and processing electronics can also be installed in a cabinet for mounting right at the mill.

The logically structured menu system allows the operator to enter key product information, monitor the product variations as they are rolled and track any out-of-tolerance conditions. Maintenance diagnostic screens enable monitoring of all digital and analog I/O points, the control frame motion, and the mill communication status. For statistical process control (SPC), the capability measurement is available as a standard feature.

Report Printouts

For product quality documentation, the following reports are calculated at the coil end or start of the next product: message list, actual coil report including histogram and last coil report. The created reports can be printed out as hardcopy or stored as PDF files. Optionally, this report output can be driven by events in the process line, i.e. at the end of a coil or the actuation of a shear.

The optional "fault location list" indicates all positions where the measured material is out of tolerance. Additionally, each record in this list indicates date, time, setpoint, actual value, and the setpoint deviation of the fault location.

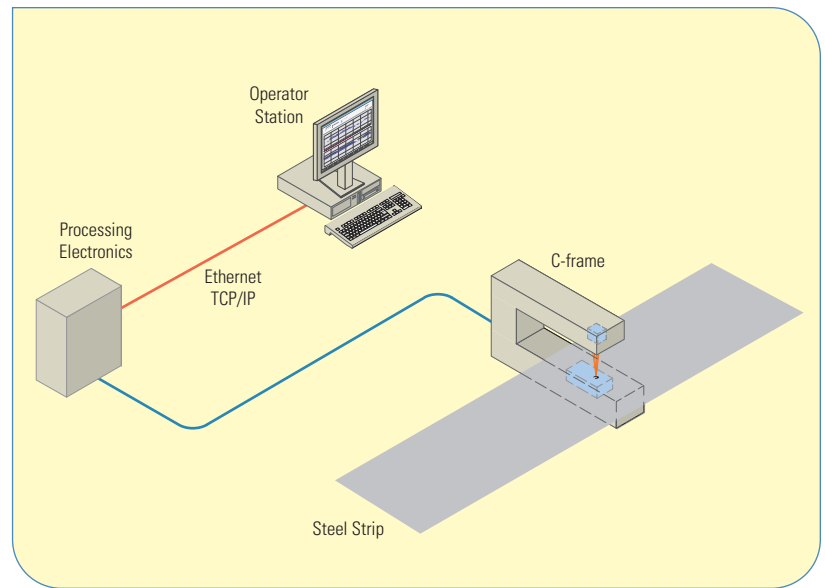
Optional ASCII archiving

The data recorded by the measuring system can automatically be stored as ASCII text file (CSV format). The stored data can be called up at any time allowing a complete inspection of the product data even if the coil was produced a long time in the past. Furthermore, the standardization history and the capability tests of the measuring system can be stored for quality assurance purposes according to DIN ISO 9001.

Interfaces

The gauge can be linked via a TCP/IP-based Ethernet protocol using the Thermo Scientific GEHI interface to allow remote system setup from a host computer without operator intervention and to transmit the measurement results. Additionally, a serial interface (RS 232 or RS 422) is available.

Typical configuration of a RM 100 EM thickness gauge in a process line



RM 100 EM

General Specifications

Source Type	Am-241 (up to 111 GBq)
Material to be Measured	Steel strip
Thickness Measurement Range	0.1 to 5.0 mm (0.004 in to 0.20 in)
Detector Type	Ionization chamber
C-frame Air Gap	Typically 200 mm (7.87 in); alternatively 100 mm (3.94 in) and 300 mm (11.81 in)
C-frame Throat Depth	Typically 1,200 mm (47.2 in)
Maximum Strip Width	2,000 mm (78.7 in)

RM 110 EM

General Specifications

Source Type	X-ray source up to 80 kV
Material to be Measured	Steel strip
Thickness Measurement Range	0.1 to 6.5 mm (0.004 in to 0.26 in)
Detector Type	Ionization chamber
C-frame Air Gap	Typically 200 mm (7.87 in); alternatively 100 mm (3.94 in) and 300 mm (11.81 in)
C-frame Throat Depth	Typically 1,200 mm (47.2 in)
Maximum Strip Width	2,000 mm (78.7 in)

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