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PRODUCT SPECIFICATIONS

Thermo Scientific RM 215 HM x-ray strip thickness gauge

The Thermo Scientific™ RM 215 HM, x-ray strip thickness gauge improves the quality of your products by providing real-time feedback of absolute or deviation-from-target thickness measurements. You benefit from high speed measurement and vital statistical data, optimizing your mill control.

Benefits

- Improved quality control
- Maximization of on-gauge material
- Reduction in scrap
- Energy savings through mill process optimization
- Certification of quality
- Faster mill setup time

Features

- 0.5 ms measurement speed
- Water-cooled detectors
- Custom-sized armored C-frame
- Real-time diagnostics
- Flexible mill computer interface
- Touch screen operator interface

The RM 215 HM x-ray strip thickness gauge demonstrates excellence in non-contact measurement of metal strip thickness with a flexible, robust platform. These measurements can be used for manual, AGC or adaptive control of the mill.

The C-frame and sensors are specifically designed for the high temperature, invasive humidity and harsh environment of hot rolling mills. Temperature and alloy compensation facilities ensure accurate measurements. The optional profile feature can be utilized in profile and subsequent shape control.

The communication link of the RM 215 HM x-ray strip thickness gauge interfaces to numerous control systems. The statistical data available for each strip is an invaluable asset for these applications. In a dual configuration on a reversing mill, the control system can benefit from both feedback and feed-forward thickness data.

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Alloy and temperature compensation

To optimize the accuracy of the RM 215 HM x-ray strip thickness gauge for stainless steels, HSLA and other alloyed products, the system offers a range of standard alloy compensation functions. Additionally, temperature tables are applied where necessary to compensate for the changing density of the material as its temperature changes. The material temperature can either be input to the system directly from the mill or via an optional pyrometer mounted, for example, within the C-frame.

Profile measurement

Edge-to-edge thickness profiles can be measured and displayed by using either a single scanning system, or two standard RM 215 HM x-ray strip thickness gauges working as a pair.

Single scanning system

This system configuration consists of a C-frame with a throat of sufficient size to travel the full width of the material. A position transducer and motor controller are used to position the C-frame at any place along the strip. With this configuration, a profile measurement is generally taken when the strip is stationary to ensure that the thickness variations in the machine direction are not superimposed on the profile.

Profiling pair arrangement

The profiling pair arrangement consists of two RM 215 HM x-ray strip thickness gauges operating in conjunction with each other. The two C-frames with their source/detector units are mounted close together. The C-frame closest to the mill bite (Gauge No. 1) is configured to measure on the centerline of the strip and the other C-frame (Gauge No. 2) continuously scans from edge to edge of the strip. In this way, all machine direction variations in strip thickness are measured by Gauge No. 1. Then, it is removed from the edge-to-edge measurement provided by Gauge No. 2, resulting in true thickness profile measurement and display. AGC feedback is provided by Gauge No. 1, while Gauge No. 2 provides calculations of crown, wedge and profile data that are used in clear graphical displays of the last four profile scans. Additional data on average temperature and thickness profiles, as well as expanded displays of the strip edge, can be presented on a large color monitor.

ISO 9001 REGISTERED COMPANY

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