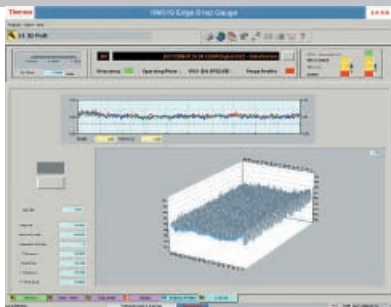


The Thermo Scientific RM 319 edge profile gauge provides real time measurement necessary to optimize thickness profile at the sheet edge during high speed rolling of flat sheet metals in cold mills. Fast and precise crown and wedge measurements ensure tighter product tolerances and reduced material scrap.

Thermo Scientific RM 319 Edge Drop Measurement System



The Thermo Scientific RM 319 edge drop measurement system is the perfect choice for cold steel producers requiring high speed edge profile accuracy. With profile measurements every 5 ms, you can increase sheet quality and mill productivity.

Sensor Technology

The solid state scintillation detectors have the speed and stability to provide centerline thickness measurements for Automatic Gauge Control (AGC), surpassing other stand-alone centerline gauges. A redundant multi-channel architecture assures you that control signals are not compromised even if a detector element fails. And with nearly a decade of satisfied customers using this generation of technology, the detector array has demonstrated its ability to be a robust solution for any application.

Located in the upper arm of the stainless steel C-frame, the two X-ray sources work together to produce fan-shaped beams that illuminate the entire strip width. They use a generator that can be set to operate at the energy level appropriate for any cold mill application.

Main Electronics Console

The electronics console contains the main electrical and electronic circuits together with an integrated technician's facility.

The technician's Touch Control Screen (TCS) allows complete on-site flexibility for system configuration or re-configuration and access to the online diagnostics facility. All gauge functions including modes of operation, selection of measured parameters and ranges, security levels and diagnostic screens can be selected and set up through the technician's TCS.

Access to all components is facilitated by the modular construction of the electronics console which permits access to all major items to provide easy servicing.

Measurement Data Provided

- Centerline AGC thickness
- Crown and wedge
- Full cross strip profile thickness
- Edge drop detail
- Length profile
- Edge position
- Ridge and groove position

Benefits

- Optimize mill throughput
- Reduce edge trim scrap
- Improve profile flatness
- Achieve tighter product tolerances
- Provide proof of strip quality

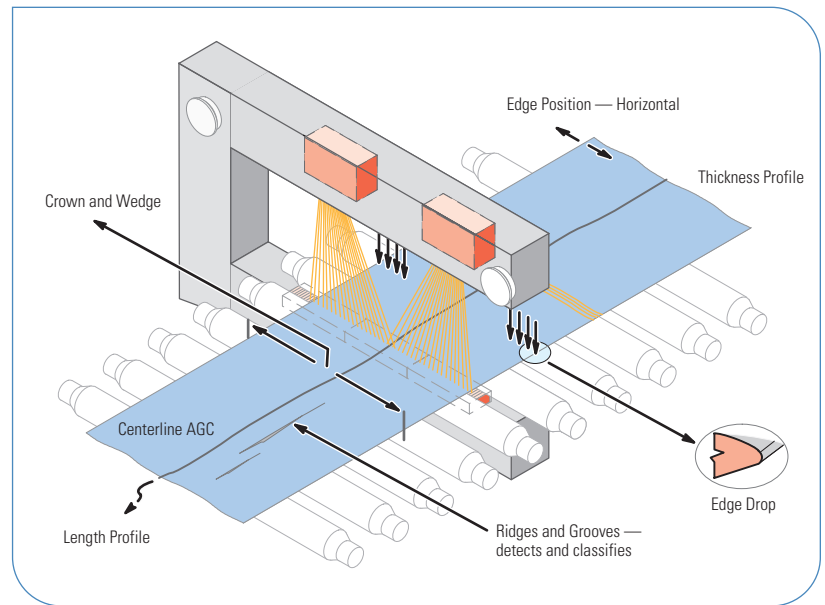
When you are challenged to maximize output from your mill, the RM 319 edge drop system is the answer. The RM 319 measurements permit mill setup parameters to be closer to product tolerances so more product is shipped and less scrap is trimmed from the edges. You benefit from savings in material costs and the energy costs associated with heating, moving and rolling material that was previously destined to be scrapped.

The full thickness profile aids in detecting localized defects such as ridges and grooves from worn rolls. With proper analysis of the data provided, the source of the defect can be found earlier and corrected quickly. Down time is minimized and mill throughput is maximized.

An additional by-product measurement from the RM 319 is the horizontal edge position. By tracking the position of the strip relative to the mill center, strips can be coiled more uniformly and the work rolls will wear more symmetrically.

The RM 319 can be paired with the Thermo Scientific RM 405 data archiving system to record all the sheet measurements for storage and analysis. The system has an intuitive, interactive interface which allows the user to create graphs with a time base domain, with 2D or 3D representation with selectable X, Y and Z axis. Pre-set formats can be created and stored to view data specific parameters from each coil using the same scaling. Using the pre-set feature, product reports can be created and printed for customers or internal QA requirements.

Typical RM 319 configuration listing all possible measurements



The RM 405 also includes extremely useful mathematical functions and processing algorithms:

- A built-in FFT analysis tool helps reveal any repetitive mill events.
- Stretching and mirror functions allow for comparison of multiple passes on reversing mills.
- A digital filter can be applied to any signal, eliminating higher frequency noise from your important data.
- Traditional statistical functions can be used on any data providing minimum, maximum, average and standard deviation values.

- Advanced statistical functions can provide process control limits and any other production metrics desired. Additionally, the RM 405 includes a formula editor with mathematical and logical functions which may be used for custom building advanced operations. This feature allows the user to manipulate single signals, or combine multiple signals to create new data for display and storage. With the RM 405 as an add-on option to the RM 319 edge drop system, the two products provide complete dimensional analysis of the rolling process.

RM 319 Edge Drop Measurement System

General Specifications

Radiation Sources	Two (2) metal ceramic X-ray tubes powered by ultra stable DC power supply
Radiation Detector	Up to 512 individual scintillation based channels
Measurement Resolution	5 mm (0.20 in) at passline
Maximum Strip Width	1500 mm (60 in)
C-Frame Height	2250 mm (88 in)
Mill Space Required by Detector	400 mm (15.75 in) in rolling direction
Communication Link	Standard TCP/IP Ethernet port; Additional Ethernet port available for data back-up to mill computer

©2007 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries. Results may vary under different operating conditions. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representatives for details. Literature Code PL9036.0907

China
+86 (0) 21 6865 4588
+86 (0) 21 6445 1101 fax

France
+33 (0) 160 92 48 00
+33 (0) 160 92 49 00 fax

Germany
+49 (9131) 998-0
+49 (9131) 998-230 fax

India
+91 (20) 6626 7000
+91 (20) 6626 7001 fax

Latin America
+52 (81) 8400-7375
+52 (81) 1257-6440 fax

United Kingdom
+44 (1452) 337-800
+44 (1452) 415-156 fax

USA
+1 (800) 488-4399
+1 (858) 452-9250 fax
www.thermo.com/metals