

In this newsletter, we are pleased to review another successful IRM group project, this time a coating weight gauge for Arcelor Mittal in Luxemburg.

In 2007, the IRM group sales of similar coating weight systems increased significantly. Obviously, many galvanizers considered that investing in an accurate and fast gauge was a major success factor in correctly controlling coating weight and reducing zinc consumption.

Following a series of thorough and independent customer tests, the FVXR-1 coating weight gauge has been recognized by leading steel producers as the highest performing system on the market today.

This year, IRM group will release new innovative products to further help customers improve their productivity with more reliable and accurate on-line measurement.

For additional information about our company and products, please forward an e-mail to info@irmgroup.info or visit our web site www.irmgroup.info

Sincerely,

Jean-Marc Philippet
Managing Director

A Challenging Gauge Replacement Project for Arcelor Mittal

Arcelor Mittal "Dudelange" (formerly "Galvalange") is a leading European producer of coated steel. Their galvanizing "line n°2" specializes in Galvalume (steel coated with an alloy of 55% Aluminium and 43,5 % Zinc and 1.5% silicon) for the construction industry, with coating weights up to 200 g/m² /side (or 26 µm per side). At the end of 2006, Arcelor Mittal decided to replace their existing coating weight gauge.

Guy Schmit, Arcelor Mittal maintenance engineer, explains: *"Our previous gauge was an isotope one. It had been supplied by a different manufacturer than IRM group. Unfortunately, we suffered serious problems in terms of reliability. In consequence, we had no other option than to replace the gauge."*



from left to right:
Guy Schmit, Arcelor Mittal maintenance engineer
Jean-Pierre Boonen, IRM group sales manager
Xavier Pech, Arcelor Mittal production manager.

Arcelor Mittal invited numerous gauge manufacturers to bid on this project. IRM group proposed its advanced, on-line, FVXR-1 coating weight gauge. This sensor uses fluorescence to measure the zinc/aluminum layer with a high accuracy.

After carefully comparing the different proposals, Arcelor Mittal chose the IRM group gauge. Guy Schmit comments: ***"We based our choice on technology, reliability and service. Our priority was to acquire a top performance gauge with the best quality/price ratio. Moreover, we paid a special attention on the fact that the design of most components was standard. Finally, we preferred X-ray technology to isotope as we felt it was better suited for a modern galvanizing line."***

Urgent Need For a Reliable Gauge



The IRM group team at work:
Geoffrey Van Helden and Pierre-Etienne Petit, service engineer
Thomas Harzé, IRM group project manager.

Arcelor Mittal needed the new gauge quickly, given their high production level and problems with the existing gauge. Thomas Harzé, IRM group project manager, explains: *"The deadline for this project was particularly short. To better serve our customer, we allocated more resources to speed up the design and manufacturing periods of the gauge. The various components were supplied just-in-time for the final assembly and tests. Thanks to the flexibility of its supply chain and the know-how accumulated for many years, IRM group was able to deliver the equipment in a record time".*

The specifics of the project were discussed extensively during a kick-off meeting held at a very early stage in the project, on the basis of a detailed technical specification established beforehand by Arcelor Mittal. Most importantly, the new O-frame had to fit within the space of the previous gauge to reduce line changes and downtime. This required additional mechanical design work, also to be completed within the short project duration. In order to avoid any drift in the manufacturing schedule, Thomas Harzé organized regular meetings with Arcelor Mittal engineers to efficiently coordinate everyone involved in the project.

In March 2007, the new gauge was fully tested in IRM group workshop. During the Factory Acceptance Test, Xavier Pech, production manager of Arcelor Mittal Dudelange, and his colleagues successfully checked all operational and performance aspects of the IRM group system. IRM group's FVXR-1 coating weight gauge was delivered at the beginning of April 2007. As a result, on-site installation and commissioning periods were completed in only one week, allowing Arcelor Mittal to restart the galvanizing line at the initially planned date.

Guy Schmit summarizes Arcelor Mittal's satisfaction: ***"During the 11 months operation since start-up, we have never had a problem with the IRM group gauge. It works with the high performance and reliability that we were expecting"***.



The FVXR-1 coating weight gauge on site.

Characteristics of FVXR-1 Gauge

The FVXR-1 coating weight gauge includes specific features, which provide the user with unique advantages:

- two sensing heads with independent drives, providing maximum operating flexibility
- very high scan speed
- (up to 300 mm/s), providing exceptional coverage of the strip surface. This feature is particularly useful for closed loop control to the air knives
- very high reproducibility of strip coating profiles. Even at 300 mm/s scan speed, there is no difference between even and odd profiles

- rectangular measurement spot
- (35 x 60 mm at pass line distance) ensuring a better edge measurement
- accurate sensor head position (+/- 1 mm)
- large air gap (100 mm between top and bottom sensing heads) and low pass line sensitivity
- high reliability (metal ceramic X-ray tube with automatic high voltage ramp-up, integrated X-ray unit, rugged traversing mechanism...)
- on line ICON sensor for %Fe measurement on galvanized

- high maintainability (simple sensor head removal for easy access to all components...)
- digital preamplifier with remote gain and time constant adjustment
- unique ridge detection system, allowing fast operator reaction

The FVXR-1 gauge can be supplied as an O-frame or as split frames to be mounted onto a bridge roll. Versions for "warm" or "cold" measurement location along the coating line are available.

*Most Advanced Coating Weight Gauge on the Market
High Reliability
Ready-to-Work at Delivery with Quick Commissioning*

A Worldwide Coverage

IRM group specializes in the Research, Design, Manufacture and Service of industrial measurement systems for all flat rolled metals, combining extensive industry experience and the latest technology. IRM group products can be used in all processing steps of steel, aluminium or other non-ferrous metals to improve production and product quality.

To better serve its customers, the IRM group provides local support in every part of the world. IRM group has currently 1600 various sensors in operation in more than 40 countries worldwide.

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For local agent contact information, please visit our website.