



Dear customers, dear partners,

Service is not only terminology at EMG, rather a valued reality. We train our staff to the highest possible standards so that they are able to manage your needs and challenges. The entire EMG-Team was delighted by the feedback received from one customer and would like to share it with you.

The motto of this newsletter is inspired by the following quotation, from an unknown author, which also lies at the heart of our motivation to provide you with excellent customer service:

"There are three things that a customer really wants: firstly service, secondly service and thirdly service."

Following our tradition, we would like to add this quote:

"Then, what the customer really wants are four things: firstly service, secondly service, thirdly service and fourthly outstanding products."

Products can only be said to be truly outstanding when they win over a customer with their high quality and technical perfection.

This is the very reason why EMG products are constantly being improved and developed. The second generation of the IMPOC-system – IMPOCpro – is currently being tested together with a customer. IMPOCpro will be available at the beginning of the fourth quarter this year. The EMG strip edge and width measurement system has also recently been fundamentally improved and extended with the VKI 3 version.

Apart from the above mentioned topics we hope that you will enjoy reading more on the following focus subjects in this June edition of the EMG newsletter:

- SWOp (Strip Width Optimization) strip width optimization in continuous operating lines with ROI in less than a year
- EMG in position – participation in events and conferences in May and June
- Magnitogorsk uses EMG's Quality Assurance Systems

Your feedback and views are always important to us. Please do not hesitate to contact either of us below:

Anno Jordan
Sales Director
Quality Assurance Systems

Heinz Dingerkus
Sales Director
Strip Guiding Systems

■ All Pros and No Cons – Improved Measuring System

EMG Automation GmbH in Wenden, Germany, is at this moment developing a second generation of its IMPOC-system which measures the mechanical properties of strip steel online. In close collaboration with a selected customer EMG extensively tested the further development of the existing version to IMPOCpro. The new system generation is scheduled to enter the market at the beginning of the fourth quarter in 2008. Just like the proven IMPOC-system, IMPOCpro non-destructively measures the tensile strength and yield point during strip steel production from now on at production speeds up to 900 m/min. The system enables process and quality control to be carried out online. →





The basic mode of operation does not differ from the current version. IMPOCpro periodically magnetizes the steel strip and then measures the intensity of the residual magnetic field both above and below the strip. The correlation with destructive testing results allows the calculation of the mechanical properties – tensile strength and yield point.

IMPOCpro thereby offers detailed and exact test measurements over the entire strip length and avoids inaccurate projections based on individual samples. The measured data, moreover, enables the operator to immediately react to a variation in strip quality.

Newly available with IMPOCpro is an admissible strip thickness from 0.15 – 3.0 mm at a strip speed of 0.1 – 15 m/s. The pulse repetition of the magnetization ranges from 0.05 – 7.5 Hz (previously max. 1 Hz), whereby the system can also be deployed in lines with a very high speed (up to 900 m/min, e.g. annealing lines).

Furthermore, the measuring head of IMPOCpro can be positioned across the strip during production of the coil and as a result measurements can be taken from different tracks. IMPOCpro is fitted with automatic strip edge identification to exclude faulty measurements close to the edge of the strip.

EMG integrates the PC server including a SQL database with the further operating and control units. The whole system is therefore more compact and slim. On the software side there will be an abundance of new features to optimize and ease the operation and introduction of the IMPOCpro-system in new lines. Already existing IMPOC-systems can be upgraded to IMPOCpro. ■

IMPOCpro key facts

The following figures provide an impressive indication of IMPOCpro's performance:

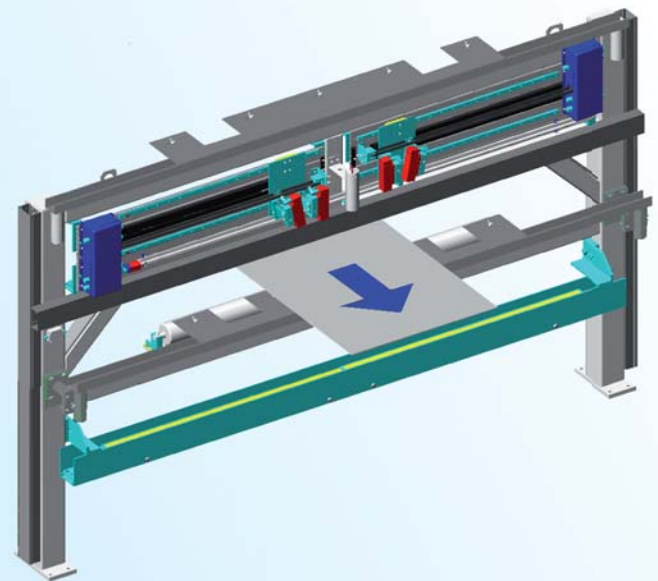
Admissible strip thickness:	0.15 – 3.0 mm
Strip speed:	0.1 – 15 m/s
Max. strip speed:	900 m/min
Pulse Repetition of magnetization:	0.05 – 7.5 Hz (previously max. 1 Hz)

■ Economical strip width optimization with EMG-SWOp (Strip Width Optimization)

In today's climate of constantly rising raw material and energy prices, conservation of resources is essential for production. Although in the past less consideration may have been given to minimizing trimmings or strip contraction during annealing processes, nowadays the opposite is true.

SWOp allows EMG to offer a system for automated strip width optimization for annealing or trimming processes. The advantages are simple to see: material, energy and cost savings thank to the minimization of the strip width of the entry coil.

Material savings can be achieved through SWOp's precision strip measuring. In annealing line installations the lateral contraction of the strip is recorded. Both the grade of steel, strip gauge and width are thereby taken into account. →





EMG's strip width optimization is technically very demanding, nevertheless, very easy to use. The system records the contraction data of all applicable steel strips in a database. Then this data is used to control the strip width of the entry coils and to calculate the desired lateral contraction, for example in the annealing processes.

In the case of trimming processes, ejected waste is minimized and a scrap level count is made before trimming. Deviations in the strip width are prevented by a warning system which is integrated in the measuring system. On exit, the width of the coil is then perfectly in tune with customer specifications. There is no need to make estimations or for heuristic approximation to get there and the strip is running continuously.

The functionality of SWOp is so convincing that EMG guarantees payback within a year. ThyssenKrupp Steel AG already relies on the EMG-SWOp for three of their lines – the FBA7, the FBA8 and the annealing line in Dortmund, Germany.

In addition SWOP offers:

- Documentation of strip width value on entry and exit
- Simple to use and overview via intuitive user interface
- Offline examination of all measured coils
- Display and storage of all relevant statistical values
- Easy installation especially where limited space is available.
- Fast commissioning
- Operational reliability and easy maintenance

■ VKI 3 – improved strip edge and width measurement in rolling mills

The harsh environmental conditions in a rolling mill are aggravated by rolling oil, haze and dirt. EMG's strip measuring system is held in exceptionally high regard due to its use of inductive technology, consequential high precision and its durability.

The measuring system sits below the strip within a protective unit. Further refinements have now been made to the previous system, and are now known as VKI 3. VKI 3 incorporates the very latest technologies together with EMG's substantial experience which has been developed over many years. VKI 3 offers customers the following advantages:

- Compact design
- Further refinements in functionality and operational reliability
- Enhanced strip width
- Input of measurement and monitoring signals directly into the line
- Unipolar direct voltage supply
- Easy installation and commissioning
- Optional light weight interchangeable wear plates

Following comprehensive testing, the first strip measurement type VKI 3, using the new ISS200 inductive sensor system, is now being delivered. This sensor system uses eddy currents to precisely measure both metal strip and metal foil edges. →





Through specific placement of the operating coils, a patent held by EMG, the system produces a precise output signal of the steel strip edges' position. An electrical potential on the steel strip within the defined measuring distance does not influence the measuring accuracy.

The sensors follow the edges of the steel strip and position values are sent to the measuring unit. Based on these position values and the sensor covering, the exact position of strip width and strip edge are calculated.

VKI 3 will be supplied with a compact and splash waterproof measuring frame. The measuring frame consists of an electrically driven unit which in turn carries the ISS200 inductive sensor system on one or both strip edges. The micro processor controlled electronic unit for signal supply, analysis and surveillance of the complete system is fully integrated.

The installation of the VKI 3 inductive steel strip measuring unit in a rolling mill enables:

- reliable determination of steel strip edge position and actual strip width
- possibility to intervene in the event of any disturbances while strip is running
- and accurate flatness regulation

■ EMG Service: Expertise for your plant

Bad service centre experiences are a daily occurrence for many service operators. The reverse is the case with EMG. We view ourselves as your partner.

The EMG team is particularly delighted when a customer gives positive feedback on EMG service quality. The following is one such example:

Dear Mr. Hochhard,

Today, Mr. Song successfully installed EMG's steel strip control on to the RCM#2.

I would like to personally take the time to inform you about Mr Song's focus on getting the job optimally done, his efficiency, and his professionalism. This good work attitude has also been noticed during his first employment at the RCM#1 before.

You can count on such employees.

Kind regards,

Reinhold Hilfert

SMS-Demag AG

Evidently here at EMG we do not expect to receive customer feedback like this every day. What we do take as given, is that our expertise always allows us to deliver the best quality products and highest quality service.

EMG trains its' employees in a fully equipped application centre at the head office in Wenden, Germany and at EMG in Beijing, China. Here service workers receive their initial training and continual professional development. EMG views highly qualified service employees as a business asset rather than a cost to the company.

With consequent time management and coordination both with the client and internally we, at EMG, achieve optimal processes for "turn key jobs" – from the beginning of the project through to commissioning. We do not solely provide commissioning and maintenance service but also provide high quality project managers. They are the EMG-system-experts, they understand customer needs and above all, they know how to achieve the highest levels of customer satisfaction. →





Please do not hesitate to provide us with your feedback. This is the only way we can improve our service for you. In the event that we do not fulfill all your expectations, we are committed to working diligently to improve things and to ensure that you become an even more satisfied customer again.

Please do not hesitate to contact EMG's Service Director, Mr. Joachim Hochhard via e-mail: joachim.hochhard@emg-automation.com. ■

■ EMG Participation in events and conferences in May/June

AISTech

AISTech 2008 took place in Pittsburgh, USA, from 05th–08th May. Anno Jordon's, EMG Sales Director Quality Assurance Systems, presentation on "EMG-eMASS – Increasing Throughput and Reducing Zinc Consumption in HDG-lines" gave participants an update on the current state of eMASS. The Stand was organized by EMG USA Inc and was well prepared for the high number of visitors. Participation in the event was rounded off with a presentation on VKI3 by Steve Devorich, Managing Director, EMG USA Inc, (please see the article on VKI3 improved strip edge and width measurement in rolling mills).

Metal & Metallurgy China

EMG was part of the German Community stand at **Metal & Metallurgy China, held in Shanghai 3rd–6th June.** Following high demand, the EMG exhibition included a model of the eMASS-system which highlighted the functionality of EMG strip stabilization. EMG has been exhibiting at this event for over 10 years and has always been proactively supported by our Chinese colleagues from EMG's Automation Beijing Ltd.

SEAISI 2008, Thailand

EMG experts travelled to Bangkok, Thailand to participate in **SEAISI 2008 which took place 12th–15th May.** The South East Asia Iron and Steel Institute (SEAISI) was responsible for organizing the conference. This was a very successful first event for EMG. Detlef Scheppe from EMG Automation GmbH, Wenden, Germany made a presentation which focused on "EMG-eMASS – Increasing Throughput and Reducing Zinc Consumption in HDG-lines". This was previously successfully presented at AISTech, and won over both the Thai and the international conference members at SEAISI. ■

■ Magnitogorsk uses EMG's Quality Assurance Systems

Magnitogorsk Iron and Steel Works (MMK) is the largest company within the Russian steel industry, and handles approximately 20 percent of Russia's total demand for domestic steel. In addition, MMK exports about 50 percent of its' annual output. MMK is an integrated steel work, covering all manufacturing stages from processing iron ore to steel finishing. In 2006 a total of 1.468.200 t Iron ore, 5.496.000 t coke, 9.732.600 t iron, 12.463.500 t steel tube and 12.059.700 t rolled steel was produced.

EMG's partner SMS Demag AG won several large orders from MMK in 2007 including an electrical and automation contract for a continuous galvanizing line and a combined galvanizing/annealing line. In addition to these orders, a recoiling, inspection and packaging line and a stand alone roll stand have also been ordered. →



In the meantime the need for high quality steel is globally recognized. On May 1st MMK consequently placed their first order with EMG via SMS Demag AG for a series of quality assurance systems for production of automotive steel sheet in Russia.

EMG delivers two double sided SORM 3plus-systems, two IMPOC-systems for the continuous galvanizing line and the combined galvanizing/annealing line (strip width to 1880 mm, strip thickness up to 3.0 mm) as well as three strip width measuring systems. This is our largest single order for the EMG Quality Assurance Systems business unit since being founded in 2006.

Since IMPOC-systems will be installed as the new generation IMPOCpro in both lines, which will be officially launched on the market in the fourth quarter of 2008. As described above, IMPOCpro measures strips up to speeds of 900m/min. The strip measuring speed for MMK will be somewhere in the region of 475 m/min, which leaves a lot of leeway for future changes. The system will be delivered in the second quarter of 2009.

This contract already demonstrates a visible change in the Russian steel market and confirms the strong future demand for quality assurance solutions in Russia. ■

Contact

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