Dear Customers, dear Partners,

“Simplicity is the result of maturity”

Johann Christoph Friedrich von Schiller (1759-1805),
German poet laureate and playwright

German poet laureate Friedrich Schiller definitely had a point. One thing not to be neglected, however, is the way to achieve any aspect of maturity. When it comes to the introduction and further development of our products, EMG places significant importance on simplicity in commissioning and application. Products only prevail if their complexity is concealed from the user, i.e. so that they don’t have to concern themselves with it; the operation of a mobile phone, for example, fortunately doesn’t require a university degree, but its development certainly does. Another element of product maturity is the possible expansion to new areas of application. In this case, things may be further simplified under certain circumstances without having to sacrifice the basic characteristics and properties of the original product.

In this newsletter you will find examples of both topics. These include, amongst others, an overview of the simple commissioning process of the EMG-Vivaldi® strip centre measuring system for continuous furnaces, which was introduced in the past year; the expansion of the field of application for the tried and tested IMPOC technology on pickling lines, which does not require the development of a line-specific model; as well as the expansion of the area of application of the reliable SMI inductive strip centre measuring system for wide strip in the aluminium industry.

We don’t know whether we have fulfilled the poet’s requirements or not, but we hope to have at least aroused your curiosity; we would greatly appreciate any information you could provide that will help us to further improve the maturity of our products and to expand their field of application. Contact us!

And now we hope you enjoy reading about the following topics:

- EMG-Vivaldi® — Commissioning isn’t “rocket science”
- EMG MICRONpro becomes established: 4 new systems for China
- IMPOCexpress for pickling lines — there don’t always have to be models
- Processing excess widths made easy: EMG’s SMI measuring frames are also able to accommodate extra wide strip
- RUIZOIL becomes EMG’s new partner for Russia, Kazakhstan and the Ukraine
- LLS technology at Light + Building 2014
- Trade shows and conferences
- EMG in profile — a brief introduction: Florian Janssen, EMG Service Team

Yours sincerely,

Jürgen Koch
Vice President Automation

EMG-Vivaldi®: Commissioning isn’t ”rocket science”

The EMG-Vivaldi® system, which was introduced in 2013 as a high-end solution for strip centre measurement in a high-temperature range, is becoming increasingly more established, especially in revamp projects for furnace control systems. Six systems have since been introduced for hard, continuous production applications. A distinguishing feature of the high-precision system, which is based on a TOF (Time-Of-Flight) radar measurement, is that its measurement is conducted through the gas-tight enclosed furnace wall, meaning no sensor elements are installed within the furnace chamber. Sensor damage caused by unforeseen strip movement is thereby excluded and a complex cooling mechanism can also be dispensed with.

We are often asked: “How complicated is the commissioning process and what needs to be considered?”
The most important answer: User friendliness is paramount and the system is delivered with a software tool, which enables parameterization and calibration of the sensor system in simple steps in a semi-autonomous manner. This EMG-Vivaldi® tool supports the following processes:

- Entry and display of basic data including furnace parameters
- Testing of the radar electronics, as well as the optical fibre cables
- Recording of the furnace empty measurement
- Calibration of the centre position of the strip
- Display of the strip position
- Activation and deactivation of the measuring data recording system

The EMG-Vivaldi® tool provides the user with step-by-step instructions for the setup process and also provides him with all of the important information for the commissioning phase. The following figure shows an example of the input mask for the furnace geometry (furnace width, thickness of the furnace wall, etc.) as well as the minimum and maximum strip width.

The EMG-Vivaldi® system uses this basic data and an empty measurement to calculate a digital representation of the empty furnace (without strip). The centre position is then calibrated by using a steel cable of known thickness. Consequently, a strip in the furnace is detected as a moving object and the centre position is calculated with extremely high precision.

The commissioning process is thereby not "rocket science" and even complex furnace geometries can be reproduced by the empty measurement described above. As with all EMG products, simplicity and user-friendliness are of utmost priority.

Curious about the EMG-Vivaldi® system? If so, please contact our product management team directly (martin.wied@emg-automation.com) or visit us online for more information about EMG-Vivaldi®.

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EMG MICRONpro becomes established: 4 new systems for China

The basic requirement of a pinhole detector is to detect pinholes; this product is of particular importance for tinplate production and the manufacture of aluminium packaging materials in order to exclude product risks in subsequent processing applications. Since any risk has to be excluded within production, MICRONpro detects holes of 10 µm or larger using an infrared transmitted-light method, thereby ensuring a high material yield and excellent product quality.
MICRONpro was introduced to the market in 2012 and has since become successfully established as a reliable system. Excellent examples of this are the systems that are currently installed at Shougang Jingtang in China. A total of 4 lines in this production plant were equipped with MICRONpro systems supplied by SMS Siemag and Ungerer. These include a tin plate processing line, two electrolytic tinning lines and a continuous annealing line. The systems were commissioned within a very short timeframe after intensive preliminary tests in Germany. The commissioning period of the system pre-assembled by Ungerer, for example, took just 1.5 days. Since being commissioned, all of the systems have been delivering critical hole data (position and size class) to the production control system in a continuous and reliable manner.

The results obtained in China underline the experience already gained in 2012/2013 with 6 pinhole detectors at ArcelorMittal in Spain. MICRONpro is a reliable solution for detecting pin holes in steel, tinplate and aluminium production processes and it exhibits the traditional industrial strength of an EMG product.

At this point, we would like to issue an important note for users of Protagon systems. As Protagon technology has been discontinued and spare parts are no longer available, EMG MICRONpro offers a seamless replacement. Please contact us directly to clarify the exact conditions for such a project.

Do you want to learn more about MICRONpro? If so, please contact our product management team directly (martin.wied@emg-automation.com) or visit us online for more information about the pinhole detection system MICRONpro.

IMPOCexpress for pickling lines — there don’t always have to be models

We reported on the successful implementation of the Power IMPOC system on pickling lines in the March-Newsletter. A system version has emerged from these experiences that is specifically tailored for pickling processes (on continuous lines and push-pull-pickling lines). The system, which goes by the name:

IMPOCexpress

is a Power IMPOC system that has been specifically tailored to the requirements of pickling lines. A special feature is that IMPOCexpress can be used immediately after installation without any time-consuming modelling or collection of samples for the production process. Instead, the system software utilizes fixed adjustment factors and algorithms for various steel groups, which allows a reliable statement regarding the relative change of the material properties over the strip length (as well as across strip width if desired). Intensive studies of samples have shown that the relative deviations from a stored, specially developed model for each steel group are typically between 1.5 and 3%.

IMPOCexpress enables reliable statements about the changes in the material strength values of the strip to be produced for the first time directly after the hot rolling process.
This results in the following possibilities:

- Immediate conclusions about the cooling process in the hot strip and its optimization
- The only way to immediately evaluate mechanical/technological properties of the finished hot strip
- Important information for product development, especially with regard to higher strength steels
- Protection of the tandem mill against critical deviations in strength values, especially with regard to coupled pickling/tandem lines

As destructive testing in pickle lines is usually omitted, IMPOCexpress is delivered with a special software configuration, without the SW module for modelling (IMPOCpro Data Analyzer) or a sample drawer and with special protective equipment for operation on pickling lines. The Power IMPOC measuring heads mean the system is suitable for material thicknesses up to 6 mm. The system can be subsequently upgraded (if desired for operational reasons) via a software upgrade to the standard software of Power IMPOC/IMPOCpro.

Do you want to climb aboard the IMPOCexpress train?

If so, please contact our product management team directly (matthias.baerwald@emg-automation.com) or get in touch with us at impocexpress@emg-automation.com. We look forward to talking to you!

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Processing excess widths made easy: EMG's SMI measuring frames are also able to accommodate extra wide strip

The fundamental requirement of the strip guiding systems supplied by EMG Automation is always the same — to ensure the strip is conveyed through the respective system in an edge or centre controlled manner. As the various system-specific requirements are extremely diverse, EMG's sensor portfolio is very extensive.

What special requirements are there? An uncoiler, for example, requires a large sensor opening; a high level of accuracy is required before an edge trimming shear; an annealing furnace is subjected to temperatures of up to 1,000 °C and more; as well as acid-resistant sensors are required in a pickling line. Typical applications such as at the uncoiler, within the strip accumulator, before trimming shears and in many line parts more, can be catered for with the inductive SMI measuring frame, which was introduced in 2010 as a new product range.

The SMI family has been configured in a way that enables a wide range of minimum and maximum strip widths as well as strip width variations to be covered. Two levels of accuracy are available: SMI-SE +/- 3 mm and SMI-HE +/- 1 mm.
RUZOIL becomes EMG's new partner for Russia, Kazakhstan and the Ukraine

 LLC RUZOIL in Moscow, Russia, is one of the leading suppliers of equipment, accessories and spare parts for industrial equipment and machinery that is manufactured and delivered to Russia by prominent foreign companies. RUZOIL pursues an integrated approach that incorporates marketing, engineering, installation assistance, training and provision of warranties. RUZOIL is therefore a potent and indispensable partner for the industry in Russia, Kazakhstan and the Ukraine with regard to modernization, revamping, regular maintenance, overhaul and emergency repairs. The company has its own qualified employees who are able to provide expert and competent advice for their customers in the metalworking industry in a very short timeframe, thereby supporting in the selection, supply and installation of the EMG products.

EMG is delighted to welcome RUZOIL and Mr. Andrey Ivanov, a.v.ivanov@ruzoil.ru, as well as Mr. Alexander Miller, engineering@ruzoil.ru as a new member of the international sales and service network of EMG Automation. Further information about RUZOIL can be found online at: www.ruzoil.ru.

In the standard configuration the strip width ranges from 400 mm to 2,400 mm. A maximum strip width change of 1,800 mm is no problem for the SMI measuring frame.

Over the last six months, however, strip guiding systems have been supplied with 17 SMI measuring frames for maximum strip widths of 2,800 mm. An Italian OEM has equipped two of its annealing lines for aluminium strip in Russia and China with this configuration. By employing the appropriate mechanical adjustments, these very “long” SMI measuring frames could also be realized with the accustomed high level of accuracy. A third mounting foot at the centre of the frame ensures the required mechanical rigidity. EMG also provided a customized solution here!

These types of wide, annealed aluminium strips are predominantly found in the aerospace industry, as well as in the automotive sector.

Would you like to find out more about our SMI family? If so, please contact our product management team directly (martin.wied@emg-automation.com) or have a look at our website about SMI.

LLS technology at Light + Building 2014

The technology for the linear light source LLS was already presented in detail in the 02/2013 newsletter. It is not only characterized by its integrated LED technology that boasts a service life of 50,000 hours, but also by its compact design and its significantly reduced energy consumption.
We are extremely pleased that the diffuser plate, which has been specially selected and used by EMG, has been chosen as a highly acclaimed exhibit at the Light + Building 2014 trade fair in Frankfurt, Germany. With 211,500 trade visitors, the Light + Building trade fair is the world’s leading exhibition for lighting and building technology. Our supplier — ALBIS PLASTIC GmbH — took advantage of the opportunity to exhibit an LLS module with this diffuser plate.

Dr. Matthias Irle, Head of Engineering with EMG, stated: “For us it is an element of future-proofing when technological components from EMG are used for a wide area of application and when they become of interest to various sectors, as is the case here with designer lighting aspects. We would like to thank ALBIS for exhibiting our product!”

Trade shows and conferences: „EMG — Your Partner for Innovative Solutions“

In the last quarter of 2014, EMG, our agencies and partners will be present at the following conferences and events. We look forward to your visit!

106th Conference and Exposition of the Galvanizers Association
EMG is proud to once again support the Galvanizers Association as a bronze sponsor for the 106th Conference and Exposition. This year’s meeting of the Association will be held between 5 and 8 October 2014 in Jackson, Mississippi, USA. Of particular interest with regard to EMG’s quality assurance systems is the lecture by Dan Hoffman, of Severstal Dearborn, on the topic “Using the IMPOC system for process control in terms of mechanical properties”, which will be held on 7 October.
Further information about the Galvanizers Meeting can be found here: www.galvanizersassociation.com.

Annual conference “Stahl” in Düsseldorf, Germany
The annual steel convention “Stahl” will be held on 6 November at the CCD Congress Center in Düsseldorf, Germany, under the motto ”Perspectives with steel”. EMG is looking forward to welcoming you again to the stand (P110/111/116/117) that is shared with the Quality Alliance.
Further information about the Quality Alliance can be found on our website: www.quality-alliance.eu.

PSME National Convention 2014, Philippines
The 62nd PSME (Philippine Society of Mechanical Engineers) National Convention will be held from 22-25 October at SMX Convention Center in Pasay City, Philippines. EMG is looking forward to welcoming you on booth #63!
EMG in profile — a brief introduction: Florian Janssen, EMG Service Team

We continue with the introductions of our service team with a member of staff who, over the past few years, has become specialized in the products of our eFAMILY (eMASS®, eWIPE, eBACS) and has just started to spend a year supporting our subsidiary EMG USA Inc. in Warren, Ohio in the USA. This is another example of the EMG service team contributing to the professionalism of our worldwide services and intercultural cooperation.

Mr. Janssen successfully completed his apprenticeship at EMG between 1999 and 2002. He then began working for EMG in the Business Unit Automation as a service technician for strip guiding systems and specific applications.

From 2004, he was involved in the first tentative steps of the EMG eMASS® strip stabilization system. Thanks to his enhanced knowledge and experience, numerous functions of the eMASS® system were able to be improved with regard to requirements for commissioning and serviceability. Besides specializing in the products of the eFAMILY, Florian Janssen is also adept at commissioning the entire EMG product range. This rounds off a competence profile that will now be of particular benefit to the American consumer market.

Service is an animate process that must continuously be open to improvement! Do you have any suggestions or comments? If so, please contact the head of our service team, Mr. Joachim Hochhard (joachim.hochhard@emg-automation.com) or also Mr. Janssen (florian.janssen@emg-automation.com) directly.

Contact

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