

Dear customers, dear partners,

"Today, strip stabilization in the steel industry is called EMG-eMASS". We have stated this confidently in our new White Paper on EMG-eMASS.

In but one year after the initial installation in the FBA 1 of ThyssenKrupp Steel in Duisburg, ten new EMG-eMASS-systems have already been delivered. In total, more than 20 systems have already been ordered, are in production or are even on their way to you.

Within a short period of time, eMASS has established itself as quasi-standard for strip stabilization in hot-dip galvanizing lines. The advantages are evident: homogeneous thickness of the zinc layer + reduced zinc consumption + satisfied customers = higher profit for the production line operator and this is you, dear customers.

As usual in our update Newsletters, we are introducing solutions aside from technical facts that have been successfully employed at our customers.

We report on:

- Cost reduction and improved quality using the EMG-eMASS strip stabilization system
- Corus Color decides on the EMG-eMASS strip stabilization system – close cooperation with Danieli Kohler
- Increase of production speed through strip looper with EMG's on car steering systems.
- Strategic reorientation in India for even better customer care
- New brochure "IMPOCpro – The New Generation"
- Acting rather than reacting – our service for you
- EMG is growing and says yes to location Germany

Wishing you an informative and exciting read

Anno Jordan  
*Sales Director*  
*Quality Assurance Systems*

Heinz Dingerkus  
*Sales Director*  
*Strip Guiding Systems*

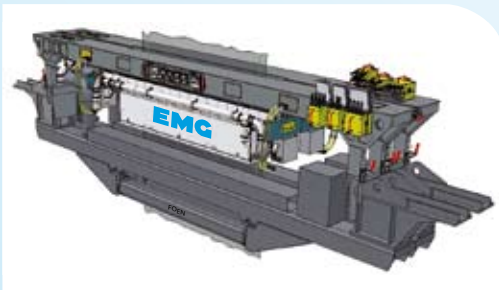
## Cost reduction and improved quality using the EMG-eMASS strip stabilization system



Today, quality and efficient allocation of resources bring decisive advantages in competition. Production of hot-dip galvanized steel strips with homogeneous surfaces and even layer thicknesses as well as maximum possible economy of the raw material zinc rank among the most important goals in all continuous hot-dip galvanizing plants.

EMG using eMASS is the answer to this challenge. The system specifically compensates strip oscillations enabling high galvanizing qualities without minimizing the production throughput. In addition, deployment of the electromagnetic strip stabilization eMASS significantly saves zinc in all hot-dip galvanizing plants.

Prices of zinc at approx. 2,000 €/t and markedly above this in the recent past, offer a high potential for significant cost reduction of hot-dip galvanized thin-gage sheet metal by deploying eMASS.



EMG-eMASS standard installation

A typical standard installation – directly on the air knife equipment which blows off the liquid zinc layer – is located at the **ArcelorMittal plant in Columbus, Ohio, USA**. The specific line group guarantee easy installation and integration into the in-plant data and electric infrastructure. The practice-oriented quick-clamping lever and the quick-connect fitting of the cooling air supply ensure the simple handling of eMASS.

Installation in less than 25 minutes, the very fast control of the magnetic force (> 100 Hz) without negative impact on the material surface, and the low energy consumption of the actuators used rank among the technical highlights of the EMG-eMASS from which ArcelorMittal and others benefit.

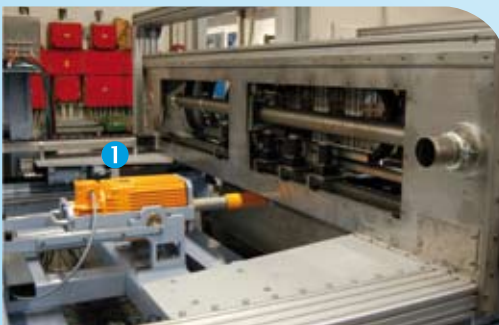


eMASS at HySCO (CGL) in Dangjiin, South Korea with adapted carrier construction

EMG-eMASS, aside from this standard installation, can be flexibly adapted to customer-specific requirements.

Such as for **HySCO (CGL) in Dangjiin, South Korea**. HySCO's goal is to gain leadership in the South Korean automobile sector with the aid of the new plant. A specific challenge was the highly cramped installation situation because of the existing, traversing pre-cooler that was situated only 400 mm above the air knife device.

The actuator housings could be accommodated in the carrier itself by adapting the carrier construction, so that the eMASS-system's full capacity was maintained even at reduced installation height.



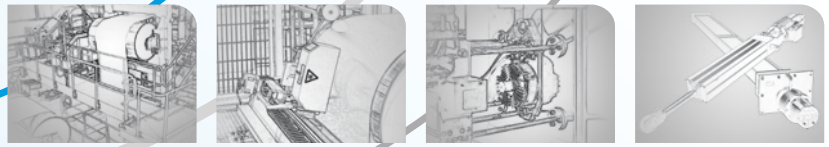
eMASS at Thyssen Krupp Steel AG in Dortmund (FBA 8) using EMG-ELDRO® ①

Goal of the **Thyssen Krupp Steel AG in Dortmund (FBA 8), Germany**, was to increase the speed of the plant. Here, the specific challenge was the installation in the cooling tower, compliance with various safety requirements, being able to quickly reach the safety position in case of power outage, and the additional detection of too little distance of the strip from the magnet housings.

Thanks to the deployment of EMG-ELDRO® – a special electro hydraulic servomotor developed and manufactured by EMG – the safety position is safely reached in deenergized state and the installation of light barriers and baffle plates will avoid jamming of the strip when heavy folds appear.

All in all, the pronounced twisting which arises from increasing plant speed could be reduced from approx. 20 mm down to only 1.5 mm which would mean the strip speed could be significantly raised.

Further installations with in part significant customer-specific adaptations can be found at **ArcelorMittal in Flemalle (Eurogal), Belgium** and also at **ArcelorMittal Florange (CGL St. Agathe), France**. ■



## Corus Color decides on the EMG-eMASS strip stabilization system – close cooperation with Danieli Kohler

Following the success with the already installed eMASS-systems at the ThyssenKrupp Steel AG and ArcelorMittal, EMG Automation GmbH confirms its increasing success having received a further eMASS order, this time from Corus, Europe's second largest steel producer.

Corus Color is the second largest European producer of undercoat-varnished and coated sheet steel, second to ArcelorMittal by a narrow margin. The subsidiary company of Corus Color, Myriad, in France is particularly renowned in the architecture trade for manufacturing premium, hot-dip galvanized and organically coated sheet metals.

In connection with optimizing the air knife system in the hot-dip galvanizing line no. 2 in Myriad through the air knife manufacturer Danieli Kohler and in the course of continuous improvement measures, the experts from Corus decided to install EMG's-eMASS-system as a solution for strip stabilization.

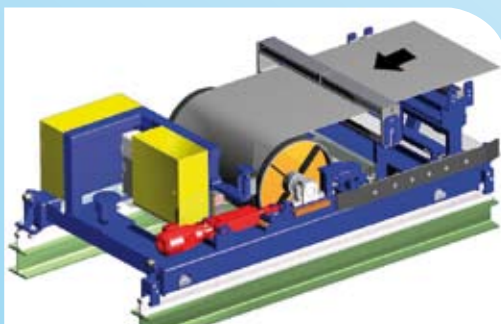
The eMASS-system minimizes the extent of strip oscillations and the crossbow effect of the steel strip. Reduced distance fluctuation between air knife and strip during the production process result in more exact coating. This in turn, optimizes coating homogeneity on the one hand, and reduces nitrogen or air consumption on the other hand. All in all, steel quality can be ensured and production output increased in this way.

The project described above will be implemented in close cooperation with Danieli Kohler by the end of the fourth quarter 2008/beginning of the first quarter 2009, and Danieli Kohler will be responsible for the mechanical integration of the eMASS-system into the air knife system. Since EMG's eMASS construction fits optimally into the air knife frame as specified by Danieli Kohler, EMG's and Danieli Kohler's technologies ideally harmonize in this combination.

As a result, this cooperation can lead to further joint projects, enabling additional fields of application for EMG's eMASS. ■

---

## Increase of production speed through strip looper with EMG's on car steering systems

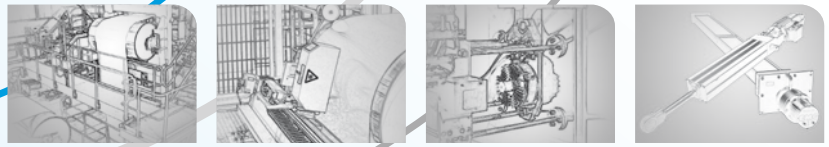


*EMG strip guiding system on a looping car*

A lot of older strip-processing lines do not use the available strip looper capacity in an optimal way. This can, for example, be attributed to the fact that on some lines certain processing speeds need to be observed to ensure the required product quality.

Often, however, it is mechanical limits of the strip loopers or poor strip quality preventing a possible higher storage capacity and hence higher strip speed. This situation is also known to be the case in newer plants.

Therefore, many companies are now equipping new plants with strip guiding systems on the looping car right from the start. Companies are making these additional investments particularly in the case of stainless-steel and silicon process plants with horizontal strip loopers or with more than 80 meters travel path in the strip looper.



The layout of the looper car may substantially differ depending on the plant. EMG provides the planning, design and/or manufacturing of such looper car guiding systems in close cooperation with the end user or the OEM of the plant.

The installation of EMG's strip guiding systems utilizing main deflector rolls or existing deflector rollers on the looper cars has stood the test of time. Secure power supply for the looper cars is provided via rail systems or cable roller assemblies.

EMG relies on proven system components which can be employed as needed. Among these are, for instance, inductive measuring systems. BMI or electroservo cylinders, ESZ work purely electrically without any hydraulic components. The high in-house production depth in the case of system components of the EMG strip guiding systems provides highflexibility to suit these applications on looper cars.

Previous retrofittings show that EMG strip guiding systems increased both processing speeds and processing safety. These two positive effects will always be a boost to production capacity.

Just contact us, if also you want to increase the capacity of your strip looper or speed of your plant. We are confident that EMG has an optimizing solution for your line too. ■

## Strategic reorientation in India for even better customer care

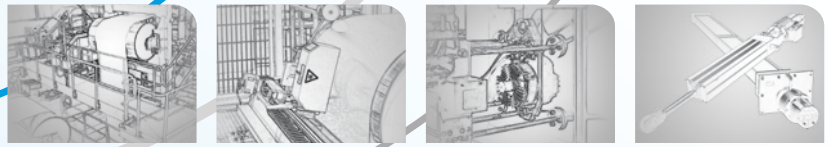
Market and customer orientation are the basis of EMG's formula for success. Therefore in order to cater to the needs of our customers in India even better, and following many years of successful cooperation with BST Sayona Automation Private Ltd., we have decided to found a subsidiary that will exclusively be responsible for the products of EMG's business unit Servotechnique Metal.

We are, therefore, very pleased that the Indian authorities have now licensed the foundation of EMG Automation India Private Limited and it is being officially founded as a joint venture between EMG Automation GmbH, Germany and BST Sayona Automation Private Ltd, India.

At the end of August this year, Mr. Bikash Kumar took over responsibility for EMG Automation India Private Limited as Vice President. In addition, the EMG India team comprises:

<b>Mr. Vikas Sandesara</b>	Business Manager – Strip Guiding Systems
<b>Mr. Rajeev Jain</b>	Business Manager – Strip Guiding Systems
<b>Mr. Satish Awari</b>	Assistant Manager Service
<b>Mr. Bhuvansingh Mehta</b>	Service Engineer
<b>Mr. Sahadev Abhyankar</b>	Service Engineer
<b>Ms. Pallavi Panchal</b>	Sales and Service Coordinator

With regard to the sale and distribution of Quality Assurance systems on the Indian market, we have decided to cooperate with a new agency, AGV Electronics, under the management of Mr. Vikas Choughule.



Since August 1st, 2008, the following contacts are available for our customers on site:

**Strip Guiding Systems:**

EMG Automation India Private Ltd.  
Mr. Bikash Kumar  
A320 Blue Rose Industrial Estate,  
Western Express Highway,  
Borivali (East), Mumbai 400 066  
India

**Quality Assurance Systems:**

AGV Electronics  
Mr. Vikas Choughule  
F 277, Solaris commercial complex, Building number 1,  
Opposite L&T Gate number 6  
Saki Vihar Road, Andheri (EAST)  
Mumbai-400 072  
India

With this strategic reorientation we want to achieve, based on the characteristics of the Indian market, even better customer care as well as prompt intensive customer support. ■

## New brochure "IMPOCpro – The New Generation"



A proven system must also constantly continue to develop and adapt to changing customer needs and processes. This was a good enough reason for EMG Automation GmbH to support the proven IMPOC measuring system with a new generation featuring improved performance and new, attractive features – IMPOCpro.

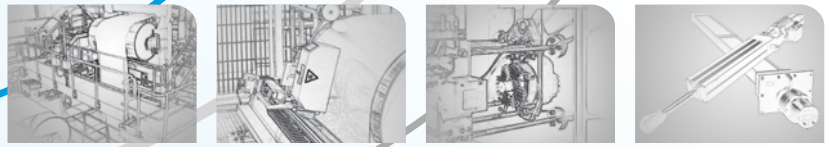
Like the proven IMPOC-system, IMPOCpro is a testing device for non-destructive testing of tensile strength and yield point in steel strip production thus enabling online monitoring of processes and quality.

The pulse sequence of magnetization ranges from 0.05 – 7.5 Hz (up to now max. 1 Hz), enabling the system to be deployed in lines with comparatively high speeds, e.g. fast annealing lines, and maximum values of up to 900 m/min.

The measuring head of IMPOCpro can be moved across the strip during ongoing production and thus make measurements on various tracks. Hence, conclusions on deviations that develop across the strip running direction (e.g. in the cooling scheme) are now possible online.

In addition, IMPOCpro has been equipped with an automatic strip edge detection system so as to exclude any faulty measurements close to the strip edge. All PC-components and further control units are integrated in a common electronics cabinet. This makes the whole system more compact and slimmer.

From the software point of view, a lot of new features will optimize and simplify handling and implementing the IMPOCpro-system. The underlying database operates on SQL-basis thus allowing simple and safe data access. Visualization



and modelling is simplified via intuitive software tools on Lab-View basis. The user may create optimized models, e.g. in the case of new types of steel, without need of taking care of calculation details. Storage of reference data from the destructive testing will do.

Our new brochure "IMPOCpro – The New Generation" will give you an overview of the general functional principles and the major innovations of the next generation. ■

---

## Acting rather than reacting – our service for you

We do not let our customers down! From training the responsible personnel via comprehensive maintenance agreements up to procurement of spare parts for our systems – EMG offers everything to secure your investments for a long period of time. This particularly applies to the comparatively new quality assurance systems SORM3plus, IMPOC and eMASS which also still need to be integrated into standard maintenance and system support procedures by most customers.

### Training

Our comprehensive training schedule addresses all who are dealing with our systems. Specific training courses for operators, maintenance or quality assurance personnel will familiarize them with all aspects of the plant. Your employees will be enabled to carry out all required operation, maintenance and repair work independently.

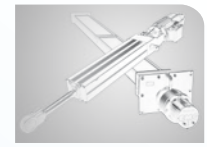
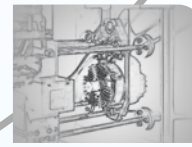
The training course may either be carried out at EMG's or at the specific production line.

### Periodic System Maintenance

We offer preventive measures for long-term and effective operation of the EMG measuring systems in form of our maintenance packages. The agreements are offered on one-off or continuous basis – maintenance interval 6 months – with appropriate benefits.

The focal points of maintenance result from long-term experiences in the field of plant operation. Worn items will be providently replaced, the mechanics maintained at critical points, updated software downloaded, and all plant parameters and plant communication checked, optimized and readjusted. With any maintenance completed, a service report will be created comprising all measurements and calibrations performed.

Our service technicians and engineers have gathered a wealth of experience from the operation of a large variety of plants. This guarantees that the operating parameters will be optimized according to the latest findings during each maintenance assignment and creeping trends or effects of wear will be identified well in time. This enables preventive action – in absolute unity with our service motto: better acting than reacting.



## Spare Parts

Detailed lists on EMG products assist in fast and uncomplicated procurements of the required spare parts.

Specific spare part kits can be picked depending on customer philosophy. In the case of quality assurance systems, EMG recommends at least the provision of components critical to operation ("mission critical") so as to secure high system availability at all times. The EMG experts will gladly advise you on your selection. ■

## EMG is growing and says yes to location Germany



*New office building at EMG*

We were able to complete our new assembly hall in the middle of this year and start relocating the first assembly islands. The production area has been extended by 2,200 sqm to the present 10,000 sqm. The extension and refurbishment had become necessary due to full order books and further growth to be expected.

Also completed is our extension for the office building which the "Servotechnique Metal" business unit will relocate to.

Hence, EMG has set the course for even more efficient and qualitatively first-class organization and production so as to successfully master future tasks and further challenges. ■

## Contact

If you have any further questions, please do not hesitate to contact:

**Anno Jordan**

*Sales Director Quality Assurance Systems*

Phone: +49-2762-612-450, Fax: +49-2762-612-384

sales@emg-automation.com, www.emg-automation.com

If you would like to stop receiving our Newsletter, please click [here](#) and write us an e-mail to opt-out.

