



Dear Customer or Partner,

Lee Iacocca once said: "The key to success is not information. It is the people". That people are connected to success is not doubted. The partner and team oriented work together with you, dear client and partner, make the success of systems, such as the EMG-eMASS, possible.

However, one must not neglect information: information, which is available to us. Without the crucial communication between you and EMG the goal oriented and respective development of quality assurance and strip guiding systems is not possible. It is this information, from practical experience stemming from your production processes, which our team feeds into the continual improvement of our systems.

For this reason we would like to adapt the Iacocca quote by saying: "The key to success is people AND information."

In this respect we look forward to future close and profitable work together with you and wish you happy reading through the EMG-Newsletter 1/2008.

Yours sincerely,

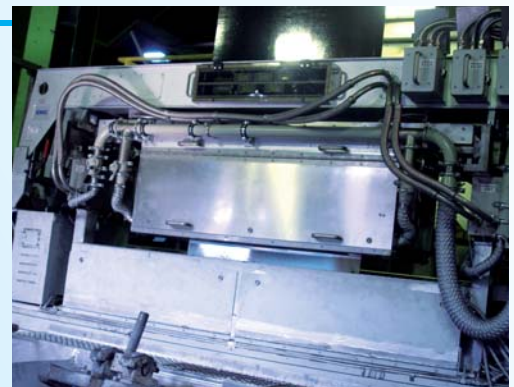
Anno Jordan
Sales Director
Quality Assurance Systems

Heinz Dingerkus
Sales Director
Strip Guiding Systems

*Lee Iacocca (*1924), American Top Manager, 1979-92 Chief Executive Officer Chrysler*

■ eMASS 1 – The Success continues

In January 2008 the EMG-team received a new order for an eMASS strip stabilization system from ArcelorMittal Asturias (Aviles), Spain. Together with this new order, ArcelorMittal has meanwhile ordered 6 eMASS-systems. One of these systems has been running in the USA for several months now and a second system will be used at Arcelor-Mittal Eurogal in the next weeks. Beside this, the biggest steel producer in the world ordered additional systems for its works in Florange, France; Gent, Belgium and Cleveland, USA.



In the meantime, one of our eMASS-systems has been working very successfully at the CGL #1 at ThyssenKrupp Steel, Duisburg, Germany since August 2007. Beside zinc saving, it is →





found out that the zinc coating is much more homogenous, a fact that attracts attention also directly to the end customers (especially in the automobile industry).

The success of the EMG-eMASS-system is also mirrored by the orders of the eMASS-systems. The following systems are already installed, are actually shipped to the customer or will be delivered in 2008:

Customer	Country	Plant/Line	Strip Width	Strip Thickness	Coating thickness	Delivery Year
Baoshan Iron & Steel, Shanghai	China	1550 CGL	800 mm ... 1850 mm	0,30 mm ... 2,0 mm		08/2007
ThyssenKrupp Steel, Duisburg	Germany	CGL#1	600 mm ... 1320 mm	0,35 mm ... 3,0 mm		08/2007
Dongbu Steel, Incheon	Korea	CGL#2	650 mm ... 1380 mm	0,20 mm ... 2,3 mm		10/2007
Arcelor Mittal, Columbus	USA	CGL	900 mm ... 1850 mm	0,35 mm ... 1,9 mm	30-300 g/m ²	11/2007
ThyssenKrupp Steel, Dortmund	Germany	CGL#8	750 mm ... 1680 mm	0,45 mm ... 1,5 mm		12/2007
Arcelor Mittal, Eurogal	Belgium	CGL	600 mm ... 1650 mm	0,40 mm ... 1,6 mm	70-275 g/m ²	03/2008
Hysco, Dangjin	Korea	CGL	600 mm ... 1860 mm	0,25 mm ... 2,3 mm		05/2008
Hysco, Suncheon	Korea	CGL#1	700 mm ... 1860 mm	0,23 mm ... 2,3 mm		05/2008
Union Steel	Korea	CGL#3	600 mm ... 1270 mm	0,23 mm ... 2,3 mm		08/2008
Corus, Zodiac	UK	CGL	900 mm ... 1830 mm	0,38 mm ... 2,0 mm	80-275 g/m ²	12/2008
Arcelor Mittal, Florange	France	CGL	750 mm ... 1875 mm	0,30 mm ... 3,0 mm	60-300 g/m ²	07/2008
POSCO	Mexico	CGL	800 mm ... 1900 mm	0,40 mm ... 2,0 mm	60-600 g/m ²	12/2008
Arcelor Mittal Aviles	Spain	Aviles Galva2	750 mm ... 1650 mm	0,39 mm ... 2,2 mm	50-180 g/m ²	07/2008
ArcelorMittal, Cleveland	USA	CGL	900 mm ... 1850 mm	0,35 mm ... 1,9 mm	30-300 g/m ²	2008
Union Steel	Korea	CGL#5	800 mm ... 1600 mm	0,25 mm ... 2,5mm	60-720 g/m ²	2008
ArcelorMittal, Gent	Belgium	CGL#1	750 mm ... 1600 mm	0,30 mm ... 2,5 mm		2008

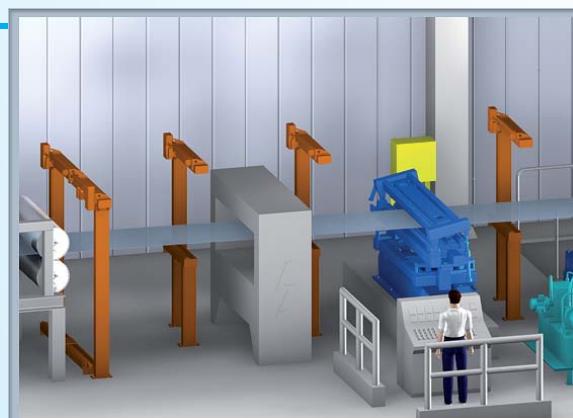
■ Strip Centering for Welding and Joining Press Applications

In the entry section of continuous strip processing lines the strip ends are joined by welding or stitching machines.

In the connecting of both strips it is extremely important that the strips are centred in reference to the centre axis and angularity. Problems in this alignment lead to strip tracking problems in all consequent process areas.

The EMG strip centering control works securely in both new facilities as well as in the modernising of existing facilities. All the different configurations in use worldwide are proof of the system's reliability, flexibility and accuracy.

One strip end is aligned to the second strip end in reference to the centre axis and angularity. This solution provides, especially when reconditioning existing paint or galvanizing lines, a very space and cost saving solution. →





Due to the accurate alignment of the strips the following improvements are achieved:

- Higher process speed due to improved automation in the entry section
- Reduction of operating staff in the uncoiler area
- Production of over-width in existing process lines
- Scrap reduction around the welding or joining area

Worldwide customers of EMG's system solution are, among others:

- ThyssenKrupp Steel, Germany
- Baosteel, China
- WISCO, China
- ArcelorMittal, Spain
- Bluescope Steel, Australia
- Salzgitter, Germany

■ EMG equips the heaviest Line in the World with Strip Guiding Systems

In close cooperation with DMS – one of the worldwide leading engineering firms with its headquarters located in Lille, France – EMG developed and installed strip guiding systems for an annealing and pickling line for Taiyuan Iron and Steel (Group) Co. Ltd. (TISCO) in China. TISCO which is located in Taiyuan, Shanxi province, is one of the largest in the stainless steel branch with a yearly production rate of 6,26 million tones.

The line finishes stainless steel strips with widths up to 2.100 mm and thicknesses up to 14 mm. The nominal strip tension for these strip formats is 400.000 N – maximum strip tensions are increased by a factor of 3. Maximum strip speed is 130m/min, line performance is 1.1 million tons p.a..

Planning of this project started in 2004, in November 2005 EMG received the order for the strip guiding systems, which were delivered on time at the end of 2006. The line was put into operation in the middle of 2007. After starting step-by-step with pilot strips, regular production began. Today reliable results coming from strips with maximum processing thickness are available, which show, that TISCO's expectations regarding EMG's strip guiding systems have been fulfilled.

■ eMASS 2 – Global Players place major eMASS-System Orders with EMG Automation GmbH

EMG Automation GmbH receives more major global orders for its leading eMASS (electro-MAGnetic Strip Stabilization) system. Beside the mentioned six systems for ArcelorMittal more global leaders such as POSCO, Hysco and Union Steel are ordering the eMASS-system.

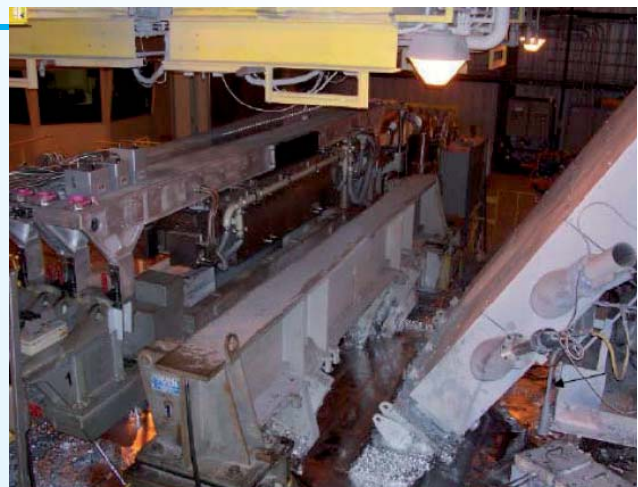
The third largest steel producer in the world, POSCO has also ordered the eMASS-system for its plant in Mexico. Delivery of the eMASS-system will take place later this year. Continuing on this wave of orders, other Korea-based manufacturers, Union Steel and Hysco have also chosen eMASS and these systems will be installed respectively delivered in 2008. →



The choice of the eMASS-system by these important companies in the international steel industry, ArcelorMittal, POSCO, Union Steel and Hysco confirms the status of EMG as a market leading supplier of strip stabilizing systems for the steel industry. The success of the eMASS-system as a reliable, high quality, cost-cutting system would not have been possible without the close co-operation and deep trust shown by customers. The basis for this continuing success in the future is not only due to the eMASS-system itself, but also to intensive personal consultation and adjustment of the eMASS-system to client's individual requirements. This kind of partnership is the basis for future developments. ■

■ eMASS 3 – Successful Implementation of EMG-eMASS-System at ArcelorMittal Columbus, USA

ArcelorMittal Columbus has already installed the EMG-eMASS-system at its Columbus plant, Ohio, USA. At this installation the EMG-eMASS-system is used directly below the galvannealing oven as an alternative for touch rolls. The installation was completed in December 2007 and was rapidly implemented without problems. Justification for the investment in the system was based on its expected ability to correct strip shape (especially crossbow) above the coating knives and also reduce strip vibration, both of which contribute to minimizing zinc consumption.



For Columbus Coatings, a line with 100 % production of lighter-coating GA products and with over 50 % critically exposed automotive parts, on the same level of importance as the zinc saving is the goal to avoid jet lines and other defects caused by poor strip shape, and furthermore lower the frequency of air knife changes when these defects occur during exposed production.

As in the first installation at the ThyssenKrupp CGL # 1, Duisburg, Germany, positive results were evident immediately upon start-up: visually the segment of the strip between the system and the coating knives was more stable, and the crossbow shape was visibly reduced in the air knife zone. Of course the crossbow re-appeared above the eMASS-system, but has no influence on the coating at this position.

Coating weight profiles across the strip width, which are displayed by the HMI in-line coating weight gauge, were flatter, and values did indicate a lowering of triple spot zinc coating weight which will permit a reduction of target coating weight in the near future and thus lower the overcoating.

Since its introduction eMASS has been ordered by ArcelorMittal 6 times world wide for different lines, underlining the strong need for a standardized strip stabilization solution for hot-dip galvanizing lines.

Contact EMG directly in the USA:

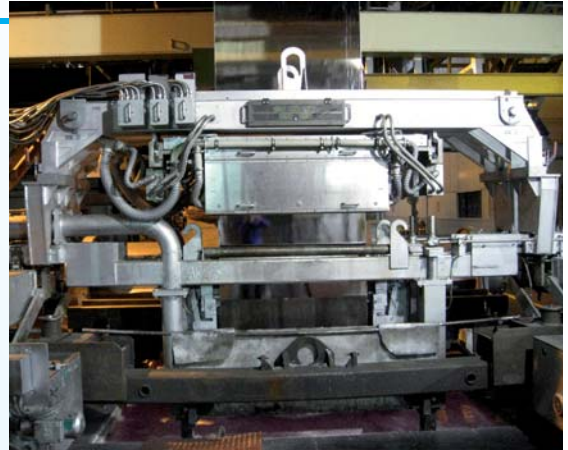
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■ eMASS 4 – From Beginning to full Acceptance in less than one year

In March 2007 Dongbu, Korea belonged to one of the first purchasers of the newly introduced EMG-eMASS-system. The installation followed in November 2007.

With it came special requirements for the operation of the system. The selectable operation of four air knives from two different manufacturers (Foehn/Kohler) needed to be warranted, as the air cooled system was to be used in the galvanizing as well as the annealing (temperatures up to 680 °C) lines. A construction and technical challenge which EMG mastered.



During the final approval of the system it showed that the expectations as well as the performance of the system, as provided in the contract, were significantly over-fulfilled in part; the damping of the strip increased by up to 75 %. So Dongbu Steel's expectations regarding zinc saving and homogeneity of the zinc layer have been surpassed.

Furthermore, Dongbu Steel was convinced by the constructive and problem-free co-operation of EMG's development centre in Wenden and the project monitoring on-site, executed by Yuwon Trading Co. Ltd. in Seoul, responsible for the EMG quality assurance systems division. The combination of exact technical preparation, technological excellence and closeness to the customer on-site guarantees smooth processing even with complex projects like this. The success of the first eMASS-project in Korea led to POSCO, Hysco and UNION Steel deciding for an eMASS-system as well. We will be reporting on the installations there in one of our following newsletters.

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