

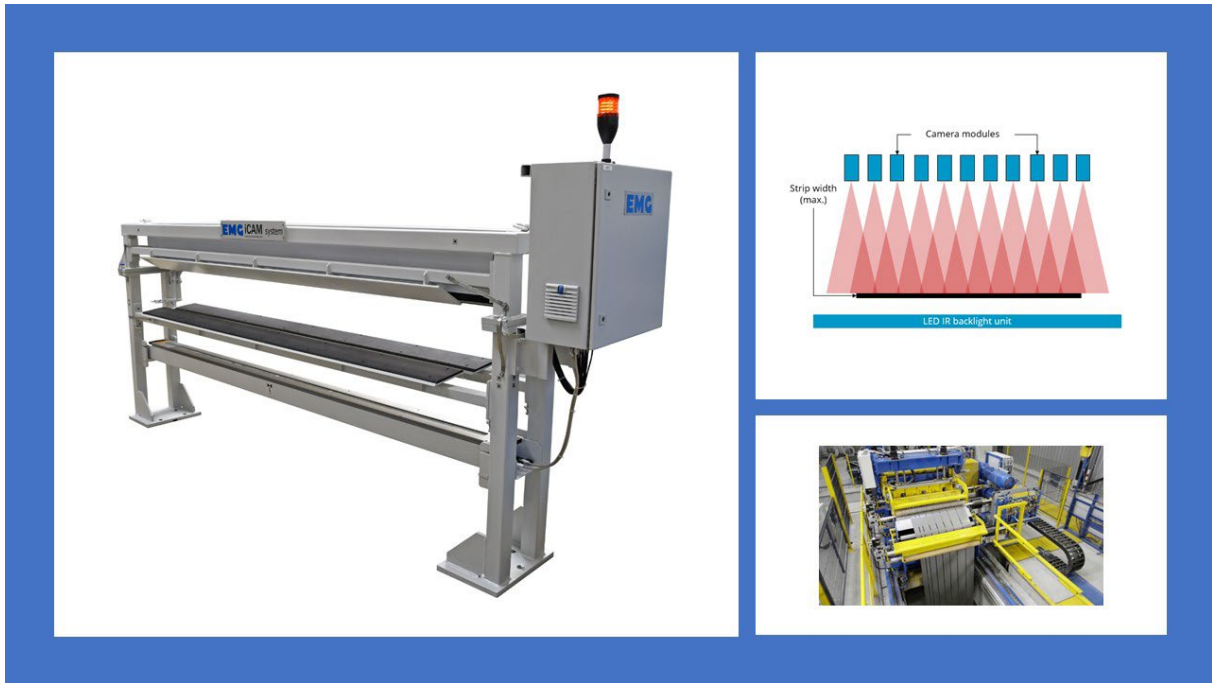
## Press release

### Precision matters: Overcoming the challenges of slit strip width measurement in metal manufacturing and processing

In the case of metal service centres and manufacturers, strips are also often slit longitudinally into a customer-specific number of slit strips in order to provide the end customer with an optimum and immediate product for use in their production processes. Measuring the width of slit strips is important for maintaining quality control, managing inventory efficiently, controlling costs, and ensuring safety in the processing of flat metals at producers, metal service centres, and processors. There are several important aspects taken into account to determine the quality costs of the production process:

- **Quality Control:** The width of the slit strip must be accurate and consistent with the customer's specifications. Accurate measurements ensure that the end customer receives a high-quality product that meets his requirements.
- **Inventory Management:** The width of the slit strip determines how many strips can be produced from a single coil. Accurate measurements help service centres manage their inventory more efficiently and reduce waste.
- **Cost Control:** The width of the slit strip can affect the cost of production. Accurate measurements help service centres optimise their production process and reduce the cost of production.
- **Process Safety:** Accurate measurements of the width of slit strips are necessary to ensure safe further processing, handling and transport of the material.

The accuracy requirements for measuring slit strip width depend on the specifications provided by the customer. Typically, the width tolerance ranges from +/- 0.1 mm to +/- 0.5 mm, depending on the thickness and width of the material. The EMG iCAM® intelligent width measurement system is the perfect answer to these requirements.



EMG iCAM® (clockwise): Measuring system with camera unit (top beam), transfer table (middle), IR backlight unit – principle of measurement and camera viewing fields - slitting line in operation

These include, among others:

- A scalable width range for narrow strip (< 100 mm), middle strip (100 - 600 mm) and wide strip (500 – 2,250 mm; up to 2,800 mm on request).
- The possibility to measure the width of slit strips in a range of typically 10 to 500 mm for each individual slit strip.
- The width of the strip or slit strip must be measured online over the entire coil length with high accuracy in the sub-millimetre range. EMG iCAM® delivers out of the box: measuring accuracy ( $2\sigma$ )  $\pm 0.1$  mm.
- All data need to be available in real time for the line control systems and must be stored for further analysis (quality and trends) and/or to be provided for the customers quality assurance databases.
- The measuring does not have to interfere with the production process. It has to be robust and reliable enough to work uninterruptedly in long time intervals in a hard industrial environment.

Due to the comprehensive design and integration know-how, the deep strip guiding knowledge of EMG as well as the intelligent analysis software EMG iCAM® masters various challenges in the processing of slit strips. These include, above all, process-related factors that can influence the measurement accuracy. These include:

- The possible deflection of the strip and edge deformation during the slitting process,
- strip waviness, edge waves, strip torsion,
- thickness variations across the strip width, and
- disturbing environmental factors such as temperature, humidity and vibration.

## **In summary**

**It can be stated that EMG iCAM® fully meets the extended user requirements for an intelligent width measurement system and offers additional value for the production and further processing of metallic strips. This concerns the possibility to also measure slit strips after the slitting process in a wide width range with high precision.**

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### **About EMG Automation**

EMG Automation GmbH, a company of the elexis group, belongs to the leading suppliers, due to its technological competence in the core area of regulation systems as well as quality assurance in automated manufacturing processes. Fields of application are fast running continuous production processes in the metal and especially in the steel industry. The product portfolio includes, besides quality assurance systems, strip running regulators. The EMG group runs its own factories as well as sales and service offices in Wenden/Germany, Oschersleben/Germany, Bielefeld/Germany, Gerona/Spain, Verrières Le Buisson/France, Saronno/Italy, Istanbul/Turkey, Elmhurst/USA, Madison/USA, Twinsburg/USA, Belo Horizonte/Brazil, Osaka/Japan, Mumbai/India, Beijing/China, Shanghai/China, Bangkok/Thailand as well as Australia.