

PRESS RELEASE

Inline Measuring Systems Optimised for Metal Service Centres

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Unique Camera Cluster Systems (CCS) guarantee top measuring accuracy for maximum precision



Caption:

The unique IMS Camera Cluster Systems (CCS) form the basis for the optical measuring systems specially developed for metal service centres

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- Customers in metal service centres increasingly demand speed, networking and modular extensibility
 - 100-percent production control through fully automated measuring technology specially developed for this field, including data storage of all measurement results, leads to an effective improvement in production results

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The non-contact measuring systems of IMS Messsysteme GmbH have been developed further consistently in accordance with the specific requirements of the industry and applicable standards since the 1980s. The measuring systems of the Heiligenhaus-based manufacturer are used in the steel, aluminium and non-ferrous metal production and processing industries wherever meticulous material testing must be ensured during production. The precision systems have therefore now become an integral part of hot and cold rolling mills around the globe.

Metal service centres also benefit from this decades-long expertise and an innovative product portfolio of inline measuring systems from IMS that has been specially optimised for this industry.

Metal service centres attach top priority to the flawless quality of their end products, while simultaneously facing ever-higher customer demands. Although the days of manual measurement have actually long passed, this type of quality control has not yet died out completely in practice, and can have a critical effect on the set-up times of machines.

Material measurements carried out by hand are often prone to error. This is especially true for measurement with calliper gauges, micrometre screws or tape measures, as well as for time-consuming measurement on measuring tables using various different measuring devices to detect surface defects and ascertain dimensional accuracy. A further, not inconsiderable potential danger lies in the transfer of measurement data, which is also often still carried out manually, as well as its evaluation and processing, which is also not infrequently prone to error. Both sources of danger, especially when added together, considerably reduce the profitability of the production process.

“There is a clear trend towards digital and fully automated systems as well as 100 percent quality control,” explains Dirk Reimertz, engineer and Sales & Product Manager at IMS Messsysteme GmbH. “Production lines equipped with automated measuring technology work highly efficiently and economically, and guarantee the customer end products of the highest quality.”

Automation of the relevant measurement tasks in metal service centres and automated data storage of all measurements lead to an effective improvement in production results.

Throughput times can also be reduced effectively in this way and compliance with even the smallest tolerance limits is guaranteed. “Our customers increasingly want more speed, networking and modular extensibility of the measuring systems,” says Dirk Reimertz, IMS expert and contact person for metal service centres.

The following standard measuring systems specially adapted for use in metal service centres already cover the most common measurement tasks:

- centreline thickness measurement
- flatness/levelness measurement
- pinhole detection
- sheet/plate geometry measurement
- slit strip width measurement
- width, hole, edge crack detection
- surface inspection



The focus in the case of the optical measuring systems lies on the unique Camera Cluster Systems (CCS), which are based on fast, intelligent high-tech cameras that are combined in so-called clusters.

Essentially, they consist of two components: a camera unit and – depending on the application – an LED or laser light source. They are linked so closely that 100 of these high-tech cameras alone are used to inspect strip 2 metres wide. Thanks to their modular design, the CCS systems can be adapted easily to any strip width or sheet and plate length. Radiometric and laser thickness gauges round off the product range. In addition, special customer-specific solutions are of course also possible.

The IMS quality data management system MEVInet-Q stores all measurement data as well as production and order data continuously during the inline measurement process, thereby

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enabling exact tracking and verification at any time. For 100% quality assurance, quality reports can be generated automatically on request and delivered for each product.

However, fully automated measurement technology is not only about economic advantages, but also about environmental protection and conservation of resources. IMS measuring systems deliver and document exceptionally precise measurement results under the toughest conditions in hot and cold rolling mills as well as service centres day after day. This means that material defects, surface irregularities, tolerance and dimensional deviations and many other factors that, in the worst case, would lead later to material rejects can be detected at an early stage in the manufacturing process. And precisely this contributes significantly to active climate protection as it is no longer necessary to produce new products to substitute defective ones, thereby saving non-renewable energy and water.