Mould Accuracy Controller DISA MAC

A new dimension in castings

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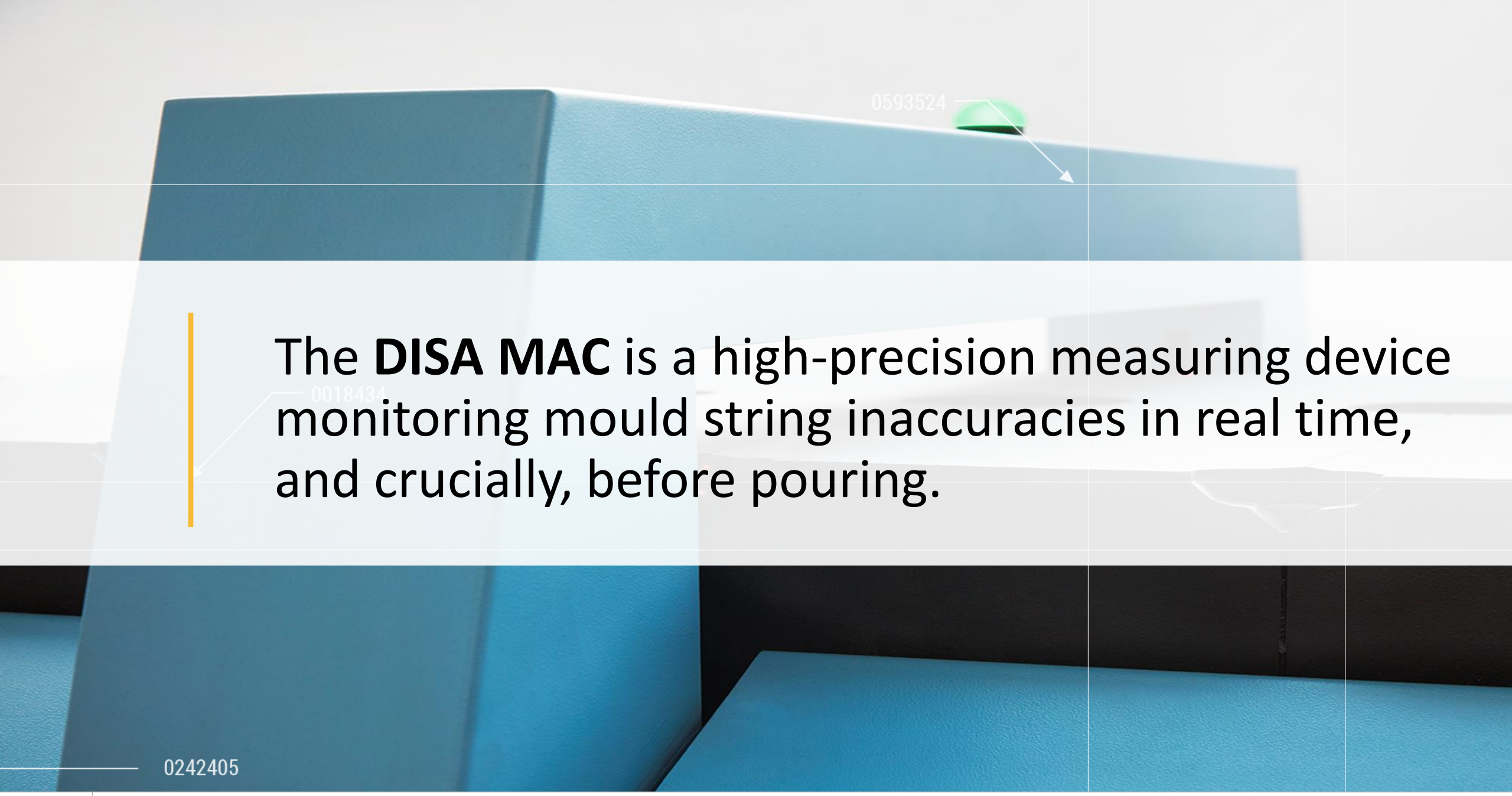
0242405



The **DISA MAC** is a high-precision measuring device monitoring mould string inaccuracies in real time, and crucially, before pouring.

DISA MAC – Measuring parameters

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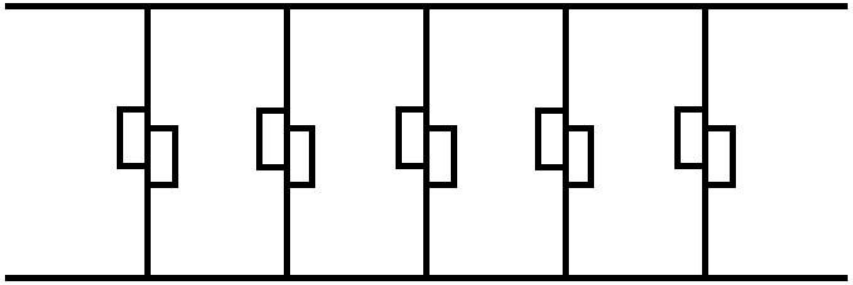
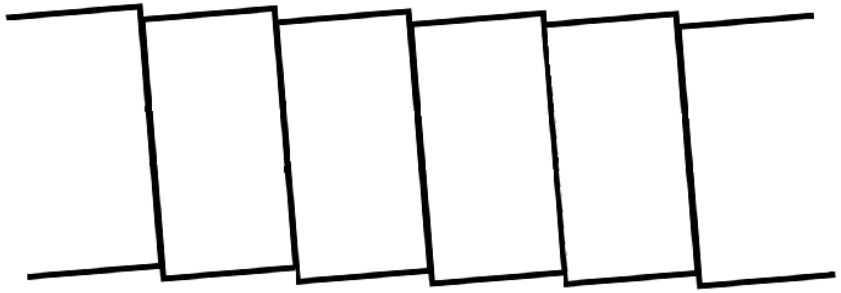
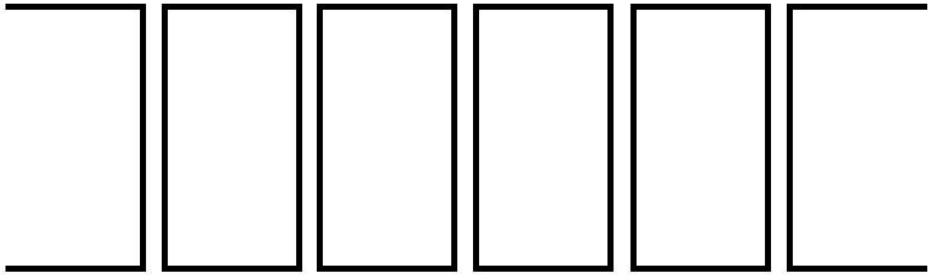
Mismatch



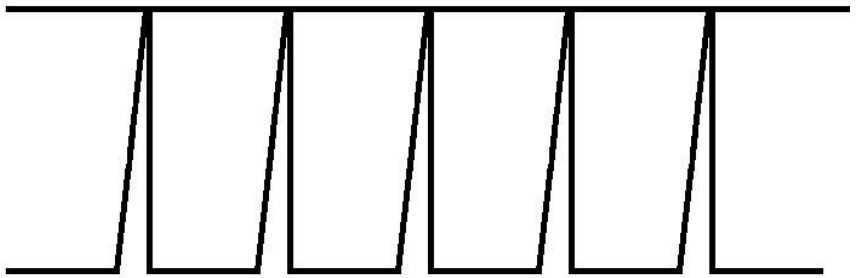
Step



Gaps



Parallelism



DISA MAC – Warnings

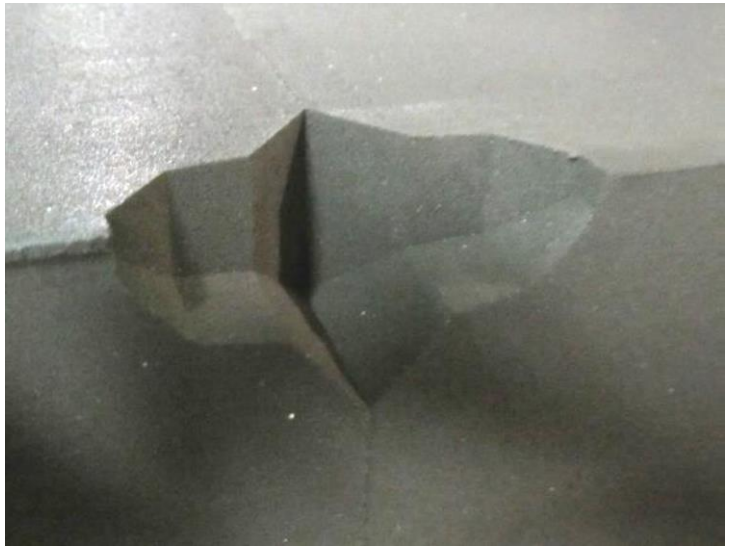
Warning when moulds are out of tolerance
(minimize scrap production)

Prevents pouring moulds with gap
(minimize downtime and scrap)

Application

MAC Pattern Blocks

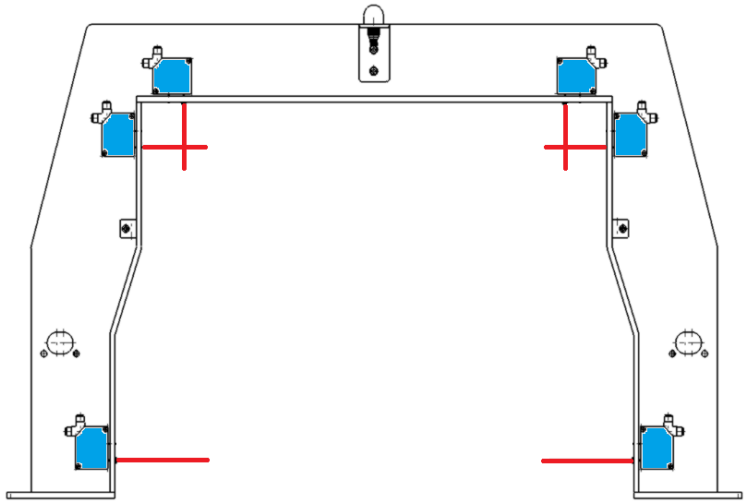
- MAC blocks are added to the SP and PP patterns, one in each corner - 8 in total
- Mould impressions are visible from outside the mould
- Block positions can be determined very precisely in relation the casting cavities
- Compensation for misalignment of blocks is possible by typing in true positions
- Blocks are designed with easy stripping and high-quality surfaces
- Worn blocks are easy to replace



Technology

Laser Sensor

- Six high resolution non-contact distance sensors using laser technology
- The sensors scan the outer visible surfaces and impression when passing by on the AMC



Retrofit solution

Operator Panel Cabinet

Retrofitting DISA MAC to existing moulding line* includes a MAC operator panel cabinet:

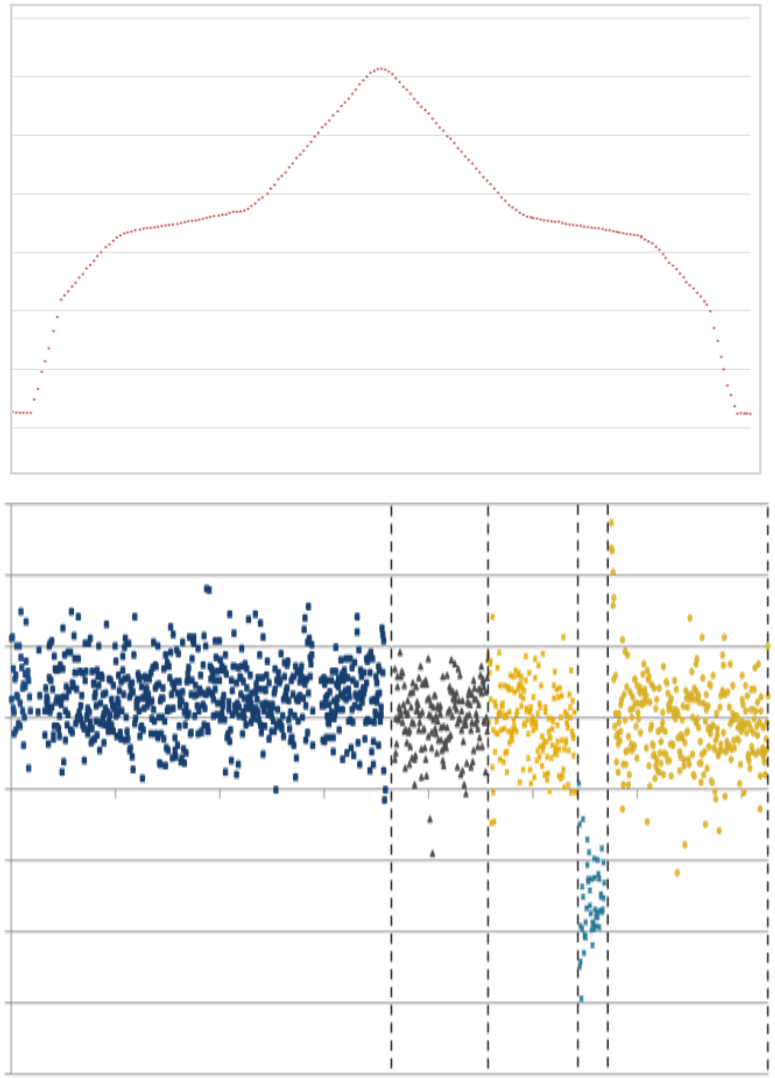
- Siemens 15” touch screen for operating
- Siemens industrial PC for collect and store data
- Power supply and UPS battery
- DISA RAC (Remote Access Connection) for remote support and troubleshooting
- Air cooling unit under the cabinet
- Cables and other various electrical components

600H x 600 W x 300D

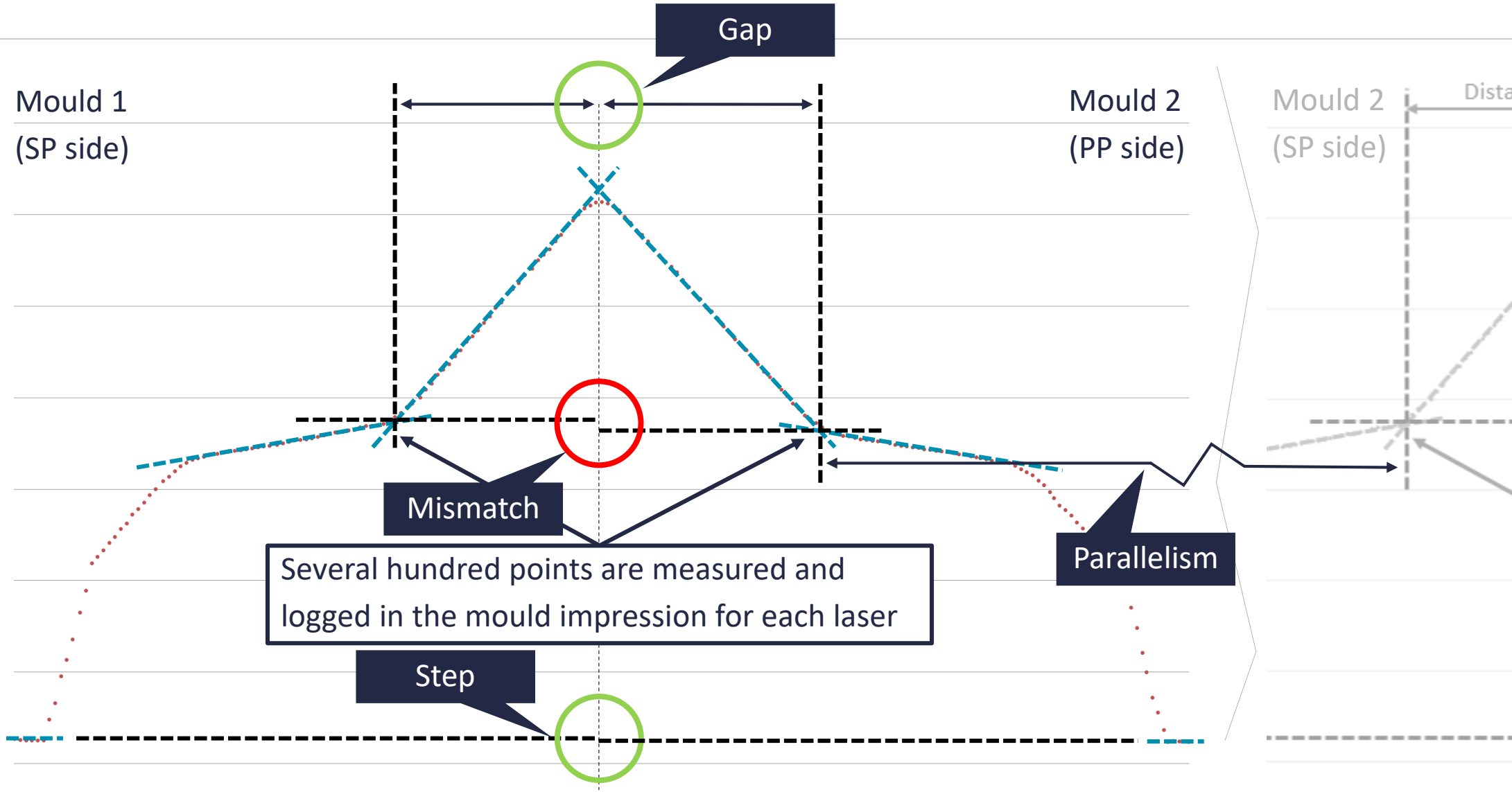
* DISA MAC is integrated into DISAMATIC D3 control system and does therefore not require a additional operator panel.

Analysis

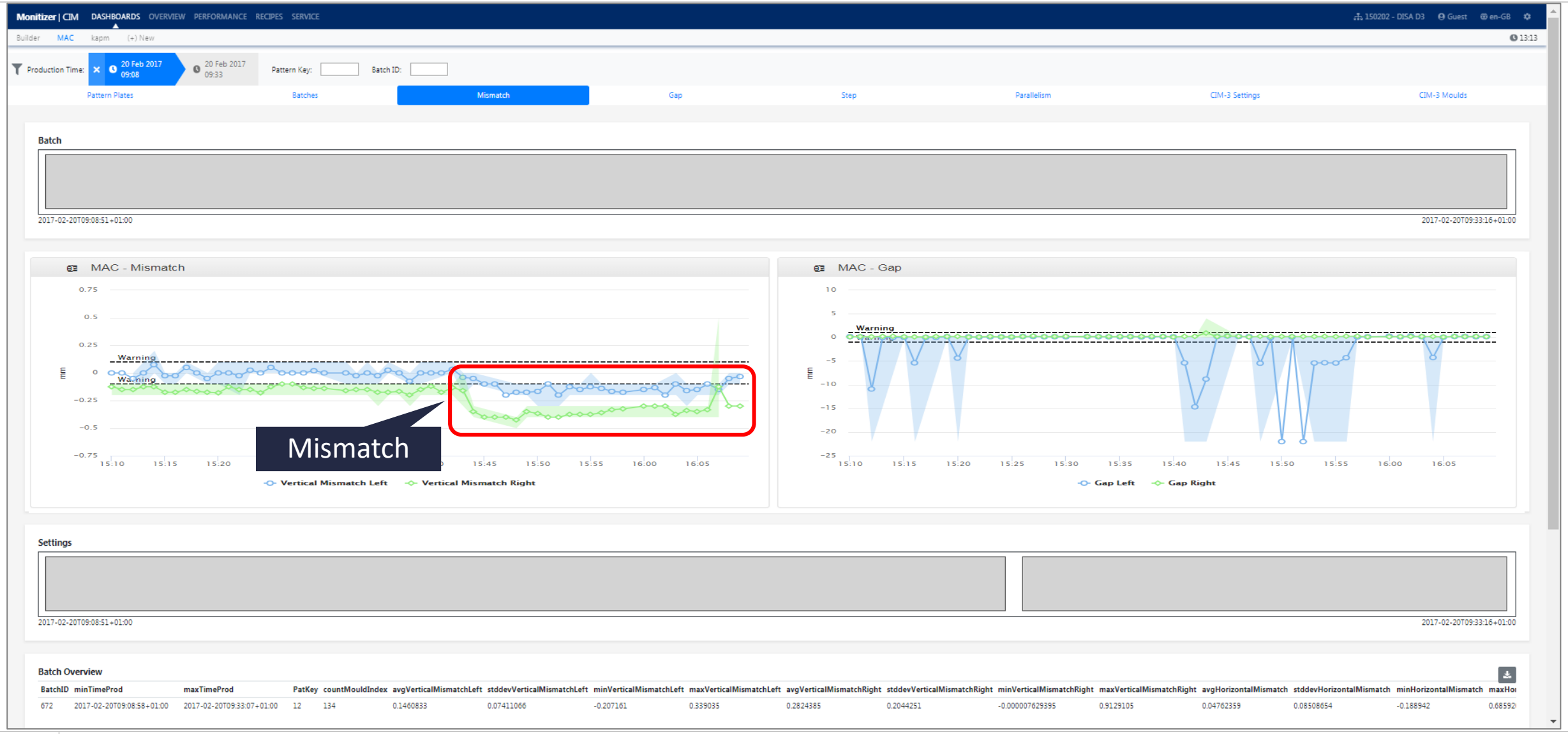
- Sensor data is saved and calculations are made live by MAC software
- Calculations result in measurement parameters
- Measurement parameters are displayed on the VDU (live) and in Monitizer | CIM (historical)
- An alarm will be sent if calculations are uncertain, which could be due to poor laser sensor data or if measurement parameters are out of limits
- Explore and expand knowledge about the moulding machine and sand preparation process stability
- Greater understanding of the stability and capability



DISA MAC – Calculation



DISA MAC – Historical analysis at Monitizer | CIM



DISA MAC – Real-time analysis at VDU/HMI

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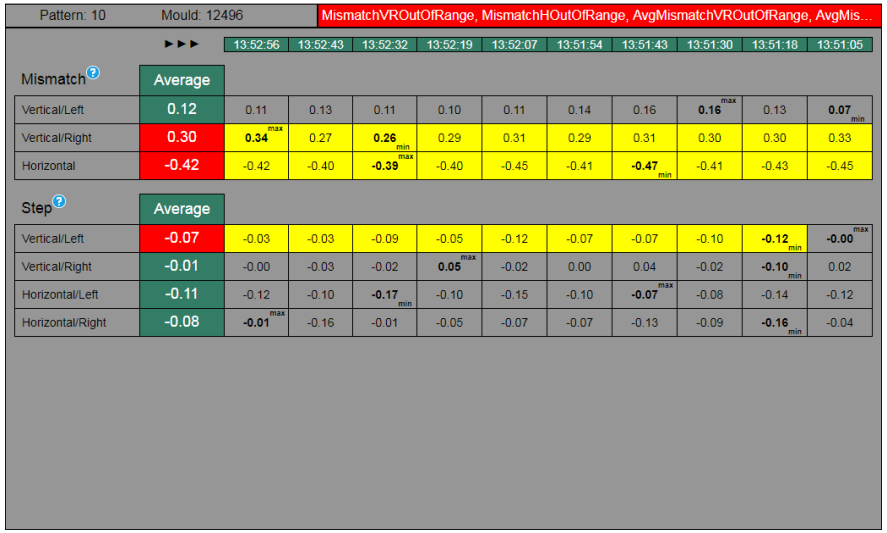
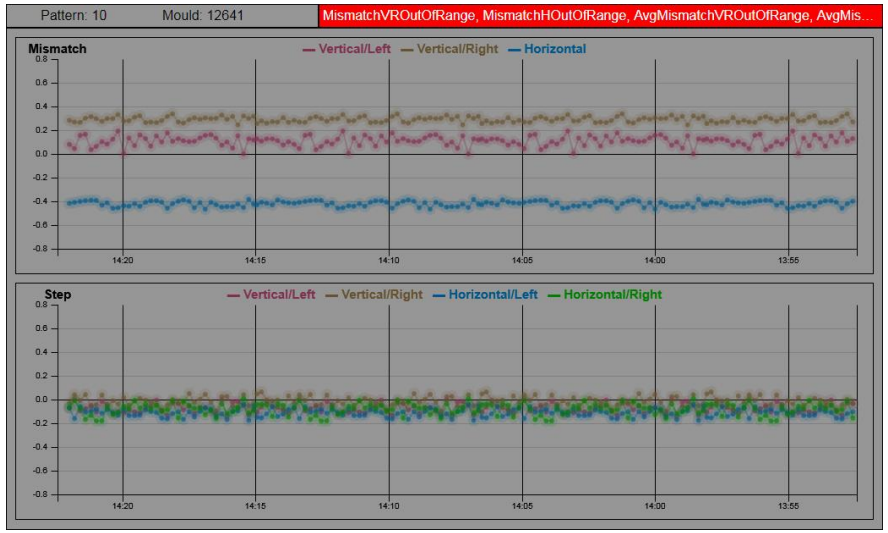
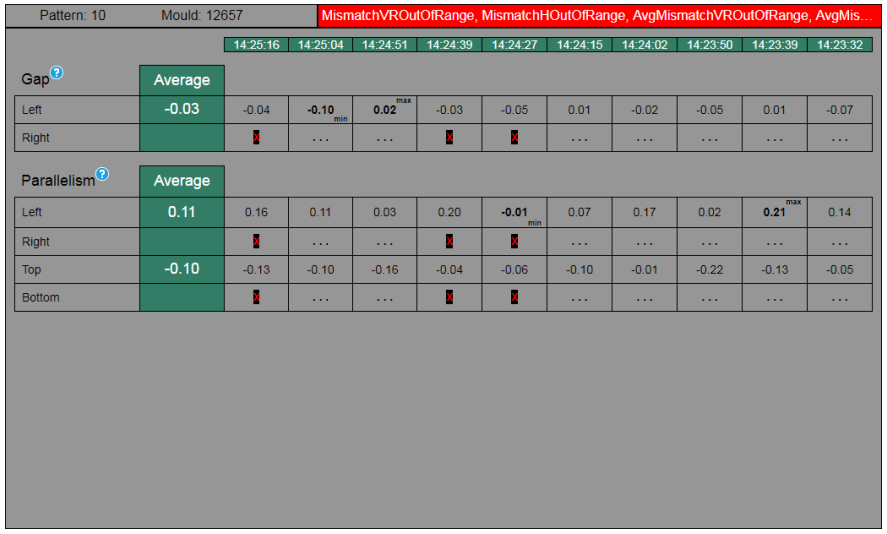
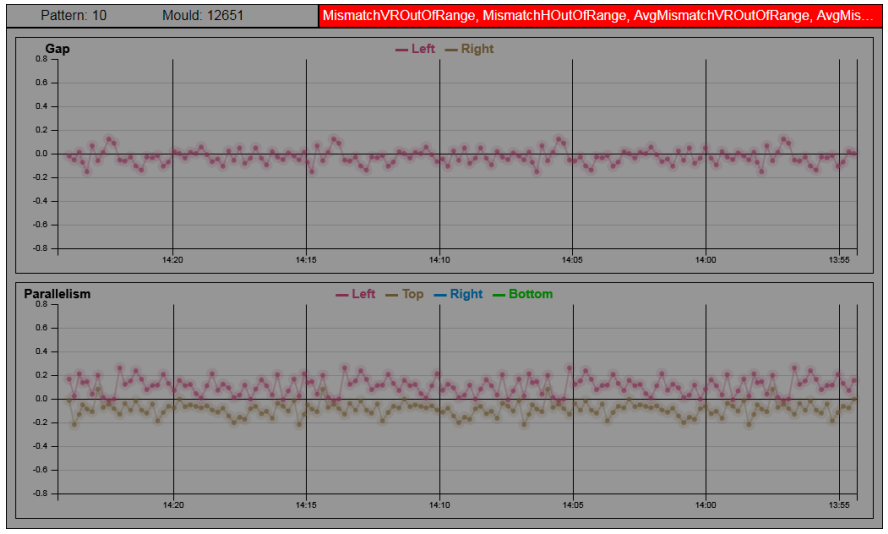
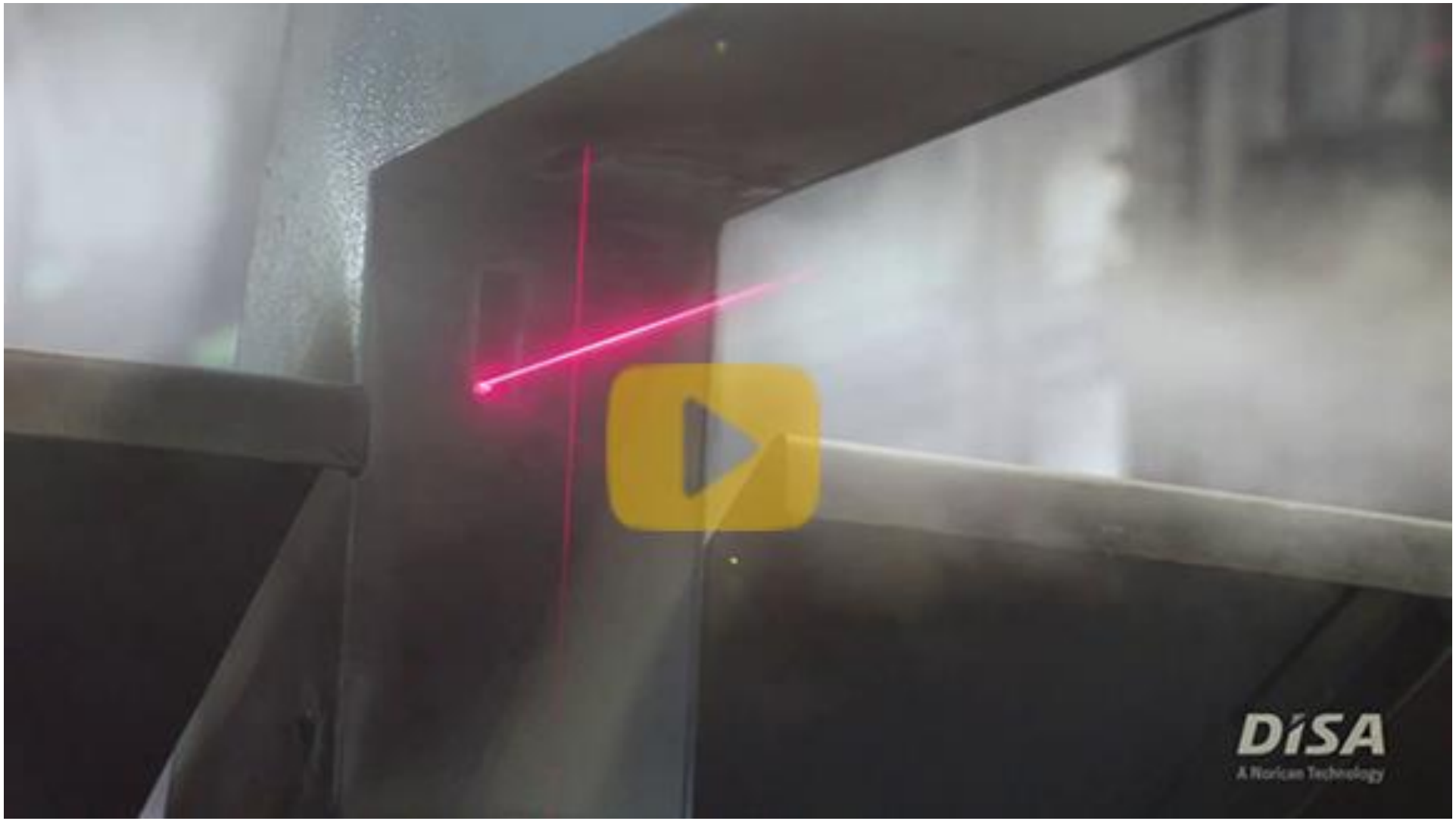




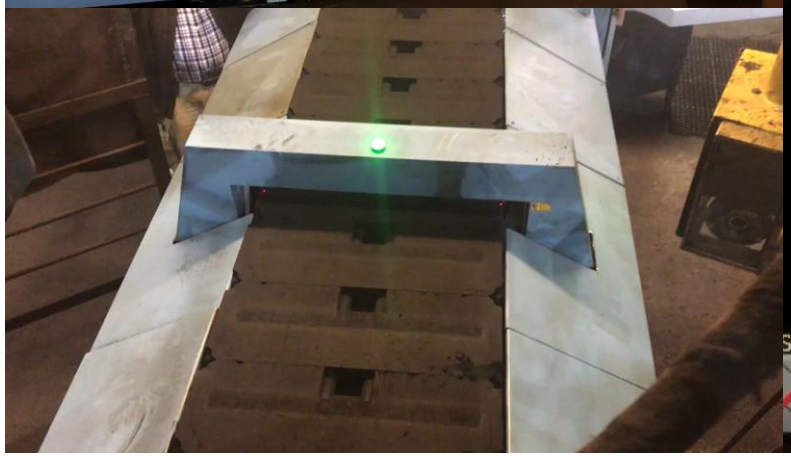




DISA MAC – Product video (From OSCO Industries)



DISA MAC demo



Advantages

Overall casting quality

- Warnings when moulds are out of tolerance (minimize scrap)
- Prevent pouring moulds with gap (minimize downtime and scrap)
- Explore and expand knowledge about moulding machine and sand preparation process
- Greater understanding of the stability and capability
- Eliminates long production runs with scrap
- Supply parts with tighter tolerance requirements
- Reduce scrap and minimize rework
- Improve overall casting quality

Thank you

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