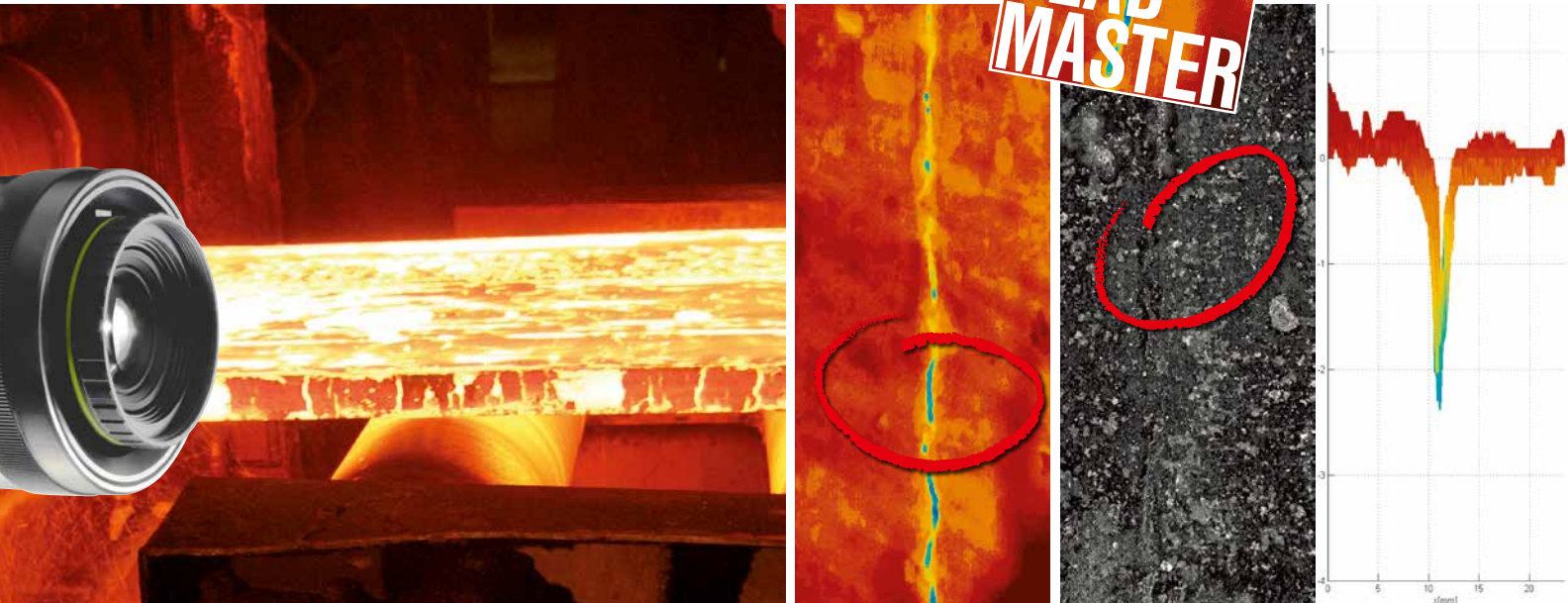


### SLAB MASTER – 3D Slab Inspection for Earliest Possible Quality Decisions



#### Advanced 3D Inspection for Optical Defect Detection and Measurement of Slabs

60% of process relevant defects already exist in the slab. About 20% of slab defects can automatically be detected by 3D surface inspection and provide important information. As an example, longitudinal and transverse cracks are often covered by the subsequent hot rolling and only become visible much later in the steel manufacturing process. At this point in the process, significant time and effort has already been wasted. These kinds of defects can now be detected early in the process, on the slab itself. The manufacturer not only saves production time and effort, but also material. Consequently, he is able to schedule repair measures in due time.

#### Most Efficient Detection Algorithms Proven in more than 600 Installations

With over 600 installed systems ISRA has extensive experience in surface inspection.

The new SLAB MASTER again sets new standards in the metal industry with the fastest start up times, an intuitive and fully automatic detection tuning tool for fast and continuous improvement of the detection performance, a hierarchical classifier with intuitive training tool for fast and continuous improvement of classification performance and a customer specific fine tuning of the detection algorithms.

#### Application

- In-line surface quality inspection for slab lines
- 3D defect measuring including defect depth
- Dimension measuring
- Top and bottom side inspection

#### Benefits

- Correct quality decisions based on high inspection performance (Precise depth information/ Sharp images/ Class Specialists)
- Best detection performance with outstanding image processing power/ Scaled computing power
- Pay back begins after one month due to fast startup
- Yield optimization based on precise process and product analysis (Interactive Live View/ Quality statistic/ Width measurement/ Thickness profile measurement)
- Improved process control with the earliest possible inspection positions of flat steel

## Fastest Startup with ISRA Instant Classifier

Compared with competitors, ISRA InstantClassifier™ knows 80% of the typical defects right from the start. Only line specific defect appearances have to be programmed with the highly efficient programming tool, ClassifierBuildEnvironment. It is Easy-to-Use and supports all relevant tasks in one tool.

## NEW: Outstanding Classification

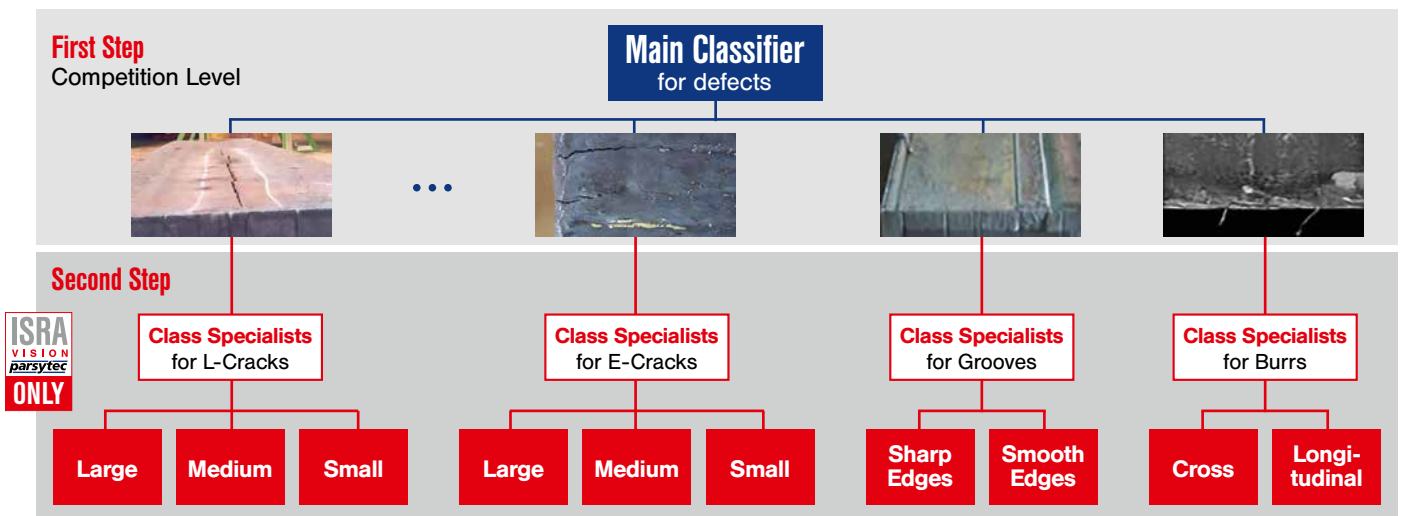
The new SLAB MASTER sensor is unique in the world of metal surface inspection and defect measurement. The accurate scanning of the hot and uneven metal surface including depth and color enables highly precise product grading and process monitoring.

- Multi-step classification for higher classification rates
- Reduced training effort
- No interference between classification specialists

## Optional Performance Enhancement with Expert Modules:

### EXPERT<sup>SM</sup> Decision Support

- **EXPERT<sup>SM</sup> SlabDecision**  
Release or block plates according to a definable rule set for surface quality
- **EXPERT<sup>SM</sup> ManualInspectionInput**  
Complete the quality information with all values that are not yet available in the systems, e.g. manually measured dimensions, result of visual surface inspection, ...
- **EXPERT<sup>SM</sup> SlabReassignment**  
Look for alternative customer order according to actual quality level
- **EXPERT<sup>SM</sup> DefectTracking**  
Understand how defects will change their appearance from slab to plate
- **EXPERT<sup>SM</sup> ProcessAnalysis**  
Visual correlation between surface quality and process parameters in real-time
- **EXPERT<sup>SM</sup> DefectTrend**  
Long-term statistic of defect type occurrence to generate quality alarms etc.



SLAB MASTER's unique Multi-step Classification for higher Classification Rates and Reduced Training Effort

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