limax
ADVANCED TECHNOLOGY

BIGSINO

FULLY-AUTOMATED SPOT GRINDING

GRINDING ASSURES HIGH QUALITY

During the production process of semi-finished materials such as slabs, plates, billets or rods, cracks and similar defects may appear on the material's surface. These defect areas may lead to material weaknesses and product uselessness during further processing.

To avoid this, semi-finished products are being monitored by crack detecting sensors. Once detected, damaged areas within the material need to be removed. Grinding is a common method of choice.

Common grinding principles have remained unchanged throughout the years: Either a product's full surface is treated, or defects are being marked and then processed manually. A transferral of data between the detection unit and the processing grinder is commonly not effective. This either leads to exceeded grinding with high material losses and time consumption, or a drastic rise in personell costs.

The new BIGSINO fully-automated spot grinder with the optional Limax marking detecting unit reinvents the grinding process within the metal producing industries. Focused on efficiency, increase of production and rentability, we present our product portfolio.

INTRODUCTION

Through steady improvements already at the state of metal casting, the frequency of defect appearance is decreasing continuously. Full surface grinding appears to be uneconomic. Manual spot grinding is the more efficient method of choice. This method however is accompanied by extended costs for personell.

Our intelligent series of grinding machines constantly exchanges data with our customer's crack detection system. Once detected defects will be grinned automatically with no unnecessary excess. This reduces operativ costs drastically: costs for specialized personell can be reduced as well as the operating power of our machines. This also leads to a decrease in abrasion of the grinding disc.

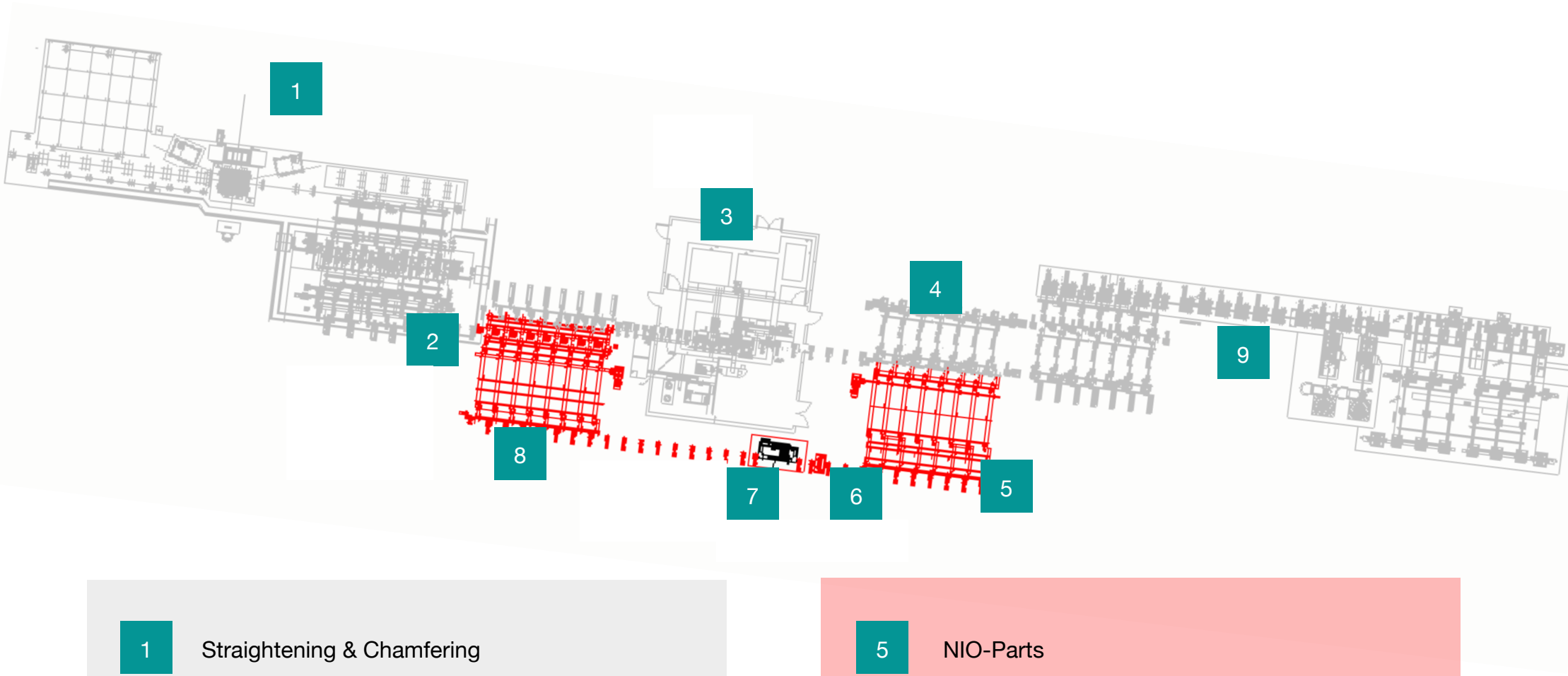
In case one already existing crack detection system is not able to give out data, an implementation of our grinder is possible anyways: Our optional marking detection unit recognized painting marks applied by the defect detection system and automatically calculates the right coordinates for grinding. This opens doors to external grinding or a step-by-step modernization of a plant.

Core element of our system is a fully-automated grinding machine. This machine will be adjusted in setup and performance regarding the individual working requirements. Our grinding machines are self-sufficient - personell is only required when grinding disks need to be changed. Through the only spot wise grinding process of the machine, times for maintenance are reduced drastically as well.

Magnetic particle testing, eddy current testing, infrared or 3d-testing: Our machines use the data from defect detection systems of your choice. In case of an incapability to exchange data directly, our marking detection system will be used. Marked defects will be recognized and automatically transferred into a coordinate system.

If required, we develop and build individual solutions for material transportation and implementation of our machine into already existing processes.

We also supply our customers with additional products: Sound absorbing housings, extraction systems and safety infrastructure.



1	Straightening & Chamfering
2	Labeling
3	Defect Detection
4	IO-Parts
9	Bundling

5	NIO-Parts
6	Marking Detection (Option)
7	Grinding
8	Initiation Inspection

BENEFITS OF FULLY-AUTOMATED SPOT GRINDING

- The individual labeling of the single semi-finished materials makes it possible to use our machines inline or externally
- Power outputs can be reduces. This leads to a reduction in operation costs
- Reduction of abrasion
- Reduction of costs for personell and trainings
- Increase of production: compared to traditional grinding methods, more material can be treated at the same time

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Limax GmbH is located in Solingen, Germany. Solingen as well as the whole surrounding of the Rhine-Ruhr area is world famous for high-quality manufactured steel producing and processing facilities and machinery. All Limax machines and products are engineered and manufactured with highest precision, accuracy and German craftsmanship. Limax has established a multi national trade gateway for proven, sustainable and promising technology. While providing its customers with most sophisticated products, Limax also introduces emerging technology from all over the world to the German domestic and the European market to strengthen distribution, infrastructures and networks.