20 years of experience at your service.

We have been designing artificial vision systems dedicated to product quality control and production line management for over 20 years. Every day we put our know-how at the disposal of companies, helping them create added value for their customers.

Industry 4.0

All the software developed by Imago meets the requirements of Industry 4.0.
The IOT, the network interconnection between machines, allows production data to be always available and to intervene in real time in case of drifts and repeated errors due to variables on the machinery. This allows us to constantly maintain a high production standard.

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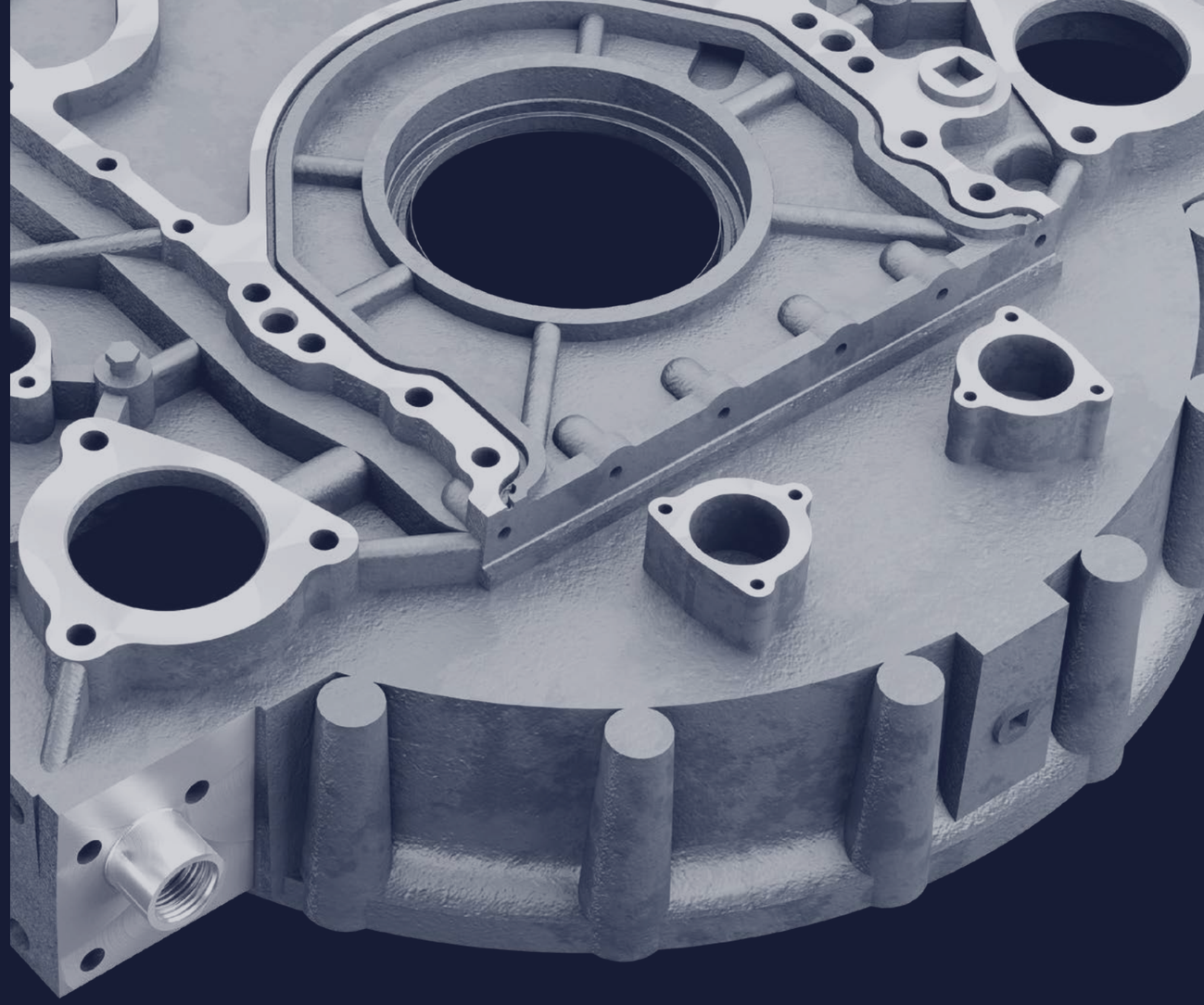
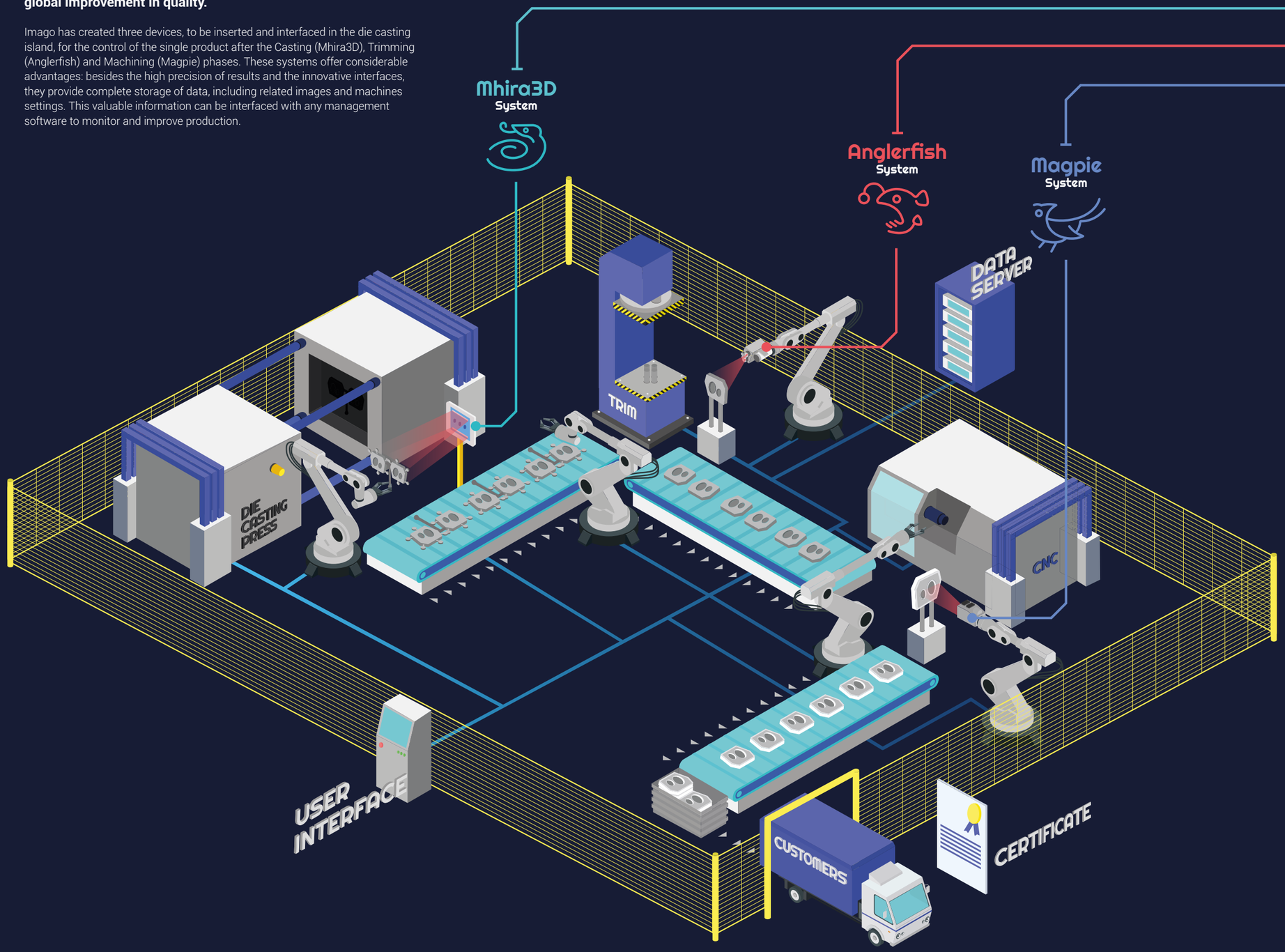


Vision systems for die casting

ENVISION YOUR FUTURE imago

Modern die casting products require specific, objectified and documented quality controls. This kind of technology can't anymore rely on the naked eye for the searching of defects. Besides an effective inspection, a complete control during all the production cycle phases allows to trace the whole production and to interact in real time with the machines, for a consequent global improvement in quality.

Imago has created three devices, to be inserted and interfaced in the die casting island, for the control of the single product after the Casting (Mhira3D), Trimming (Anglerfish) and Machining (Magpie) phases. These systems offer considerable advantages: besides the high precision of results and the innovative interfaces, they provide complete storage of data, including related images and machines settings. This valuable information can be interfaced with any management software to monitor and improve production.



Mhira3D

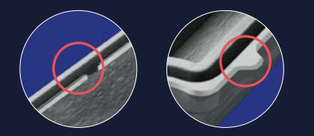
Casting integrity control, thermal analysis and thermoregulation management immediately after extraction from the press

As soon as the piece is extracted from the press, it is immediately checked by the robot in the clamp (as is done with the proximity sensors). The vision system is three-dimensional and is able to verify the integrity of the piece with extreme speed and precision even in its most hidden parts. At the same time the instrument carries out a thermographic mapping that shows any thermal drifts even in small areas of the piece. In addition, the gripper is checked to prevent damage in the subsequent Trimming phase. Thanks to the thermographic map, it is possible to act on the cooling and identify any defects in the die. All this with a cycle time of less than one second. Mhira 3D is the first device to allow defects control in the piece and thermographic survey at the same time.

Anglerfish

3D integrity check, post-Triminig deformations and breaks

After Trimming, it is very important to check the integrity of the piece. Anglerfish performs this type of control in 3D and inspects the flatness and regularity of the trimmed areas, detecting excesses or defects of material up to 0.2 mm and eventual, even partial, occlusions of the holes. By this method, defects that become visible only after Machining can be prevented, thus avoiding waste.



Magpie

Checking machined surfaces at end-of-line

Machining can bring out types of defects that are not visible before, such as porosities, and that can cause damage, such as broken edges or non-compliant burr residues. Thanks to Magpie the porosities are identified by size, density and distance. Centesimal burrs are detected both in the holes and on the edges, whose integrity and regularity are checked. The following are also checked: the degree of surface finishing of the work, the presence of cracks, breaks and dents. This total end-of-line control allows us to supply the customer with only compliant parts.

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