ALPING ASIA
AUTOMATION

AlpAFS

AUTOMATIC FURNACE SPILLAGE

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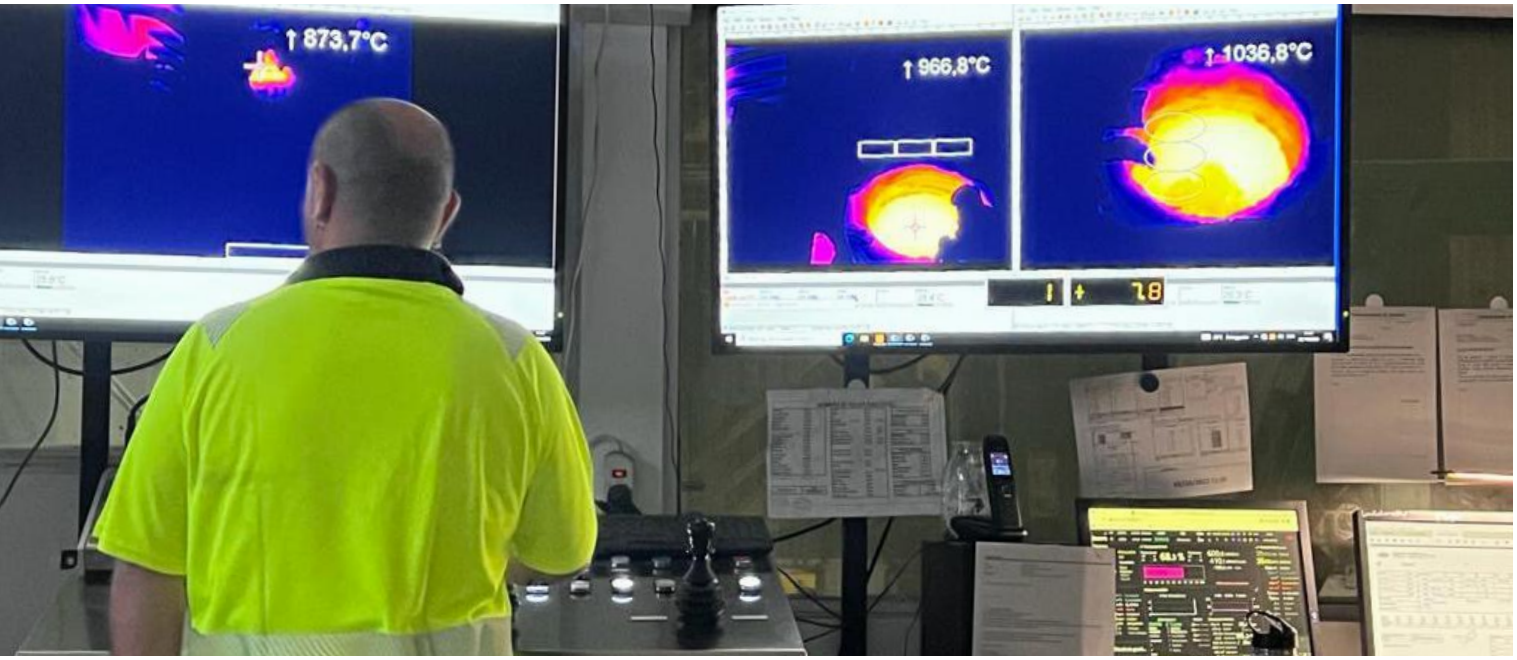
AIpAFS is an automatic system based on several and special cameras for detecting the iron flow, on which an algorithm provides to determinate the right tilting furnace bath.
The solution is based on the AI (Artificial Intelligence), designed to ensure the philosophy: no man on floor.

OVERVIEW

- Automatic calculation.
- Application at both low and high material temperatures.
- Precise calculation (+- 13mm).
- Resistant to wear, heat, and high mechanical stress.
- Operational efficiency and versatility thanks to the experience in the field of metal.
- Reduced system, installation, and maintenance costs.



AIpAFS uses state of the art technologies that exploit the high-tech features of the most modern AI. This innovative system can meet the continuous challenges in the steel maker plant.
AIpAFS is the ideal solution to overcame various problems, for instance the system offers several advantages, ranging from reduced tapping time to the total elimination of operator risk, who must go to the dedicated tapping pulpit at each pour and located near the kiln and ladle. Pinning can take place in both EBT and free-jet systems.
The solution proposed can be installed as an add-on technological module on the iba platform eco-system.

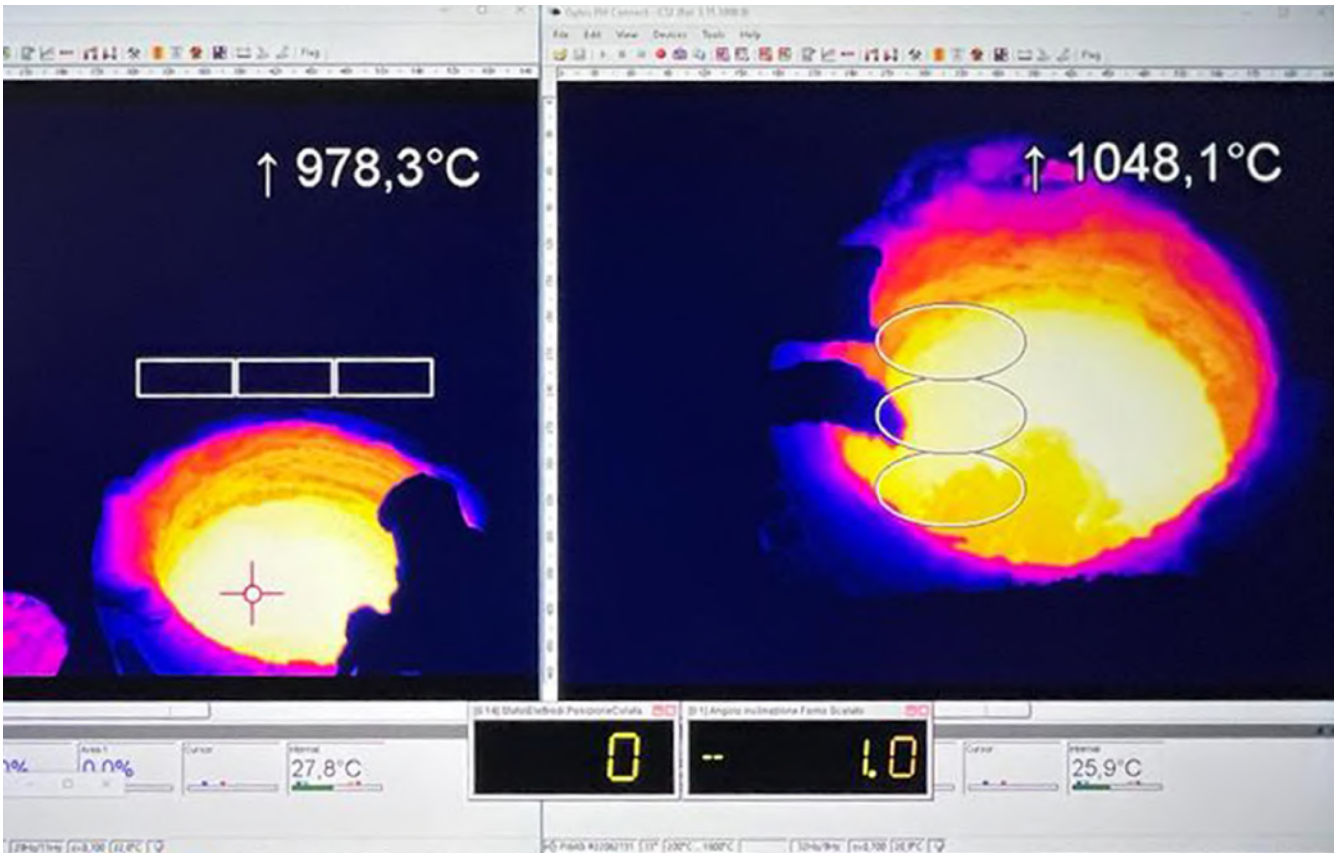
SYSTEM ARCHITECTURE

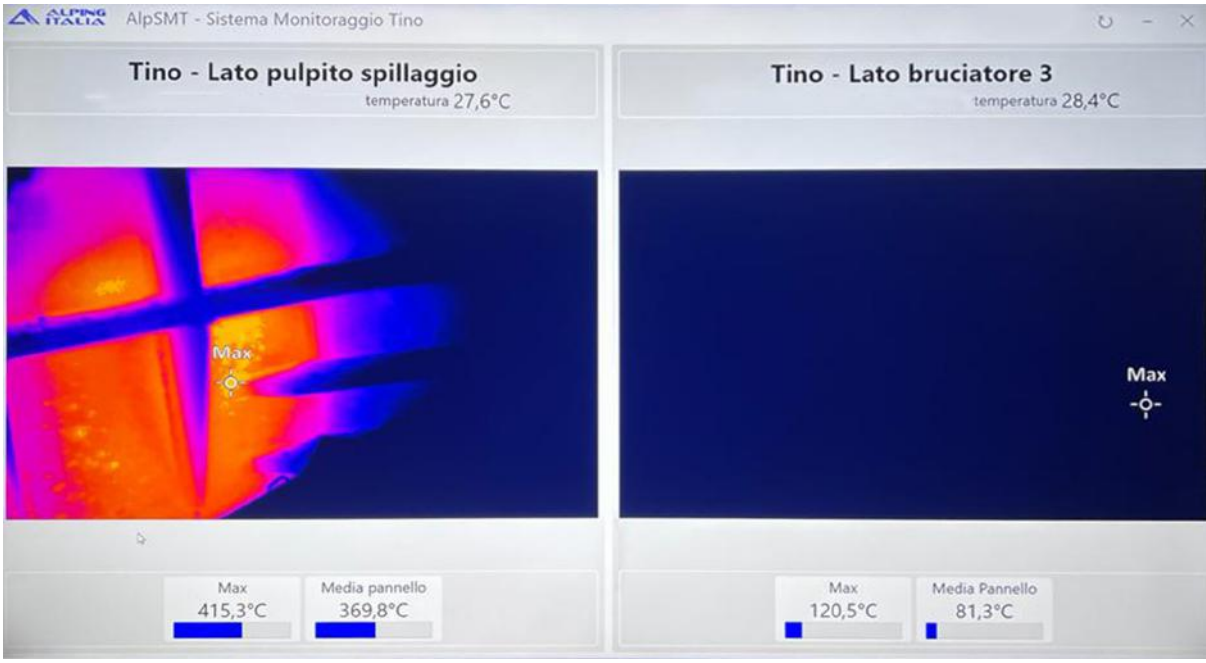
AIpAFS is an automatic system, which is based on the discipline of Artificial Intelligence by which Artificial Vision technique play an important role in identifying individual events, necessary to generate the appropriate outputs to best manage the tapping sequence automatically. The system has a hardware architecture and various software layers designed to ensure both speed of algorithm execution and accuracy of evaluation, as well as congruity and consistency of input and output information. The entire architecture is designed, developed and installed with the purpose of also being reliable in handling a dangerous process.

- ARTIFICIAL INTELLIGENCE
- MACHINE VISION

HOW IT WORKS

AlpAFS makes use of a series of cameras that detect the steel casting in the ladle and through specific algorithms determine the flow rate, which transformed into kilograms per second calculates the amount of steel presumed to be in the ladle. The outher cameras verify the rising level in the ladle by performing a cross-check. During these operations, the surrounding environment, smoke, dust and heat, determine the success of the system, which we have been able to study, install and put into service at our customers operating in the steel industry.





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