

Smart Manufacturing Summit 2023

Milano
3-4/5/2023



Zanforlin Maurizio
ORI Martin



"Smart Manufacturing Summit 2023"





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MARTIN



DIGITALIZATION, MACHINE VISION AND ROBOTICS

DIGITALIZATION, MACHINE VISION AND ROBOTICS IN ORI MARTIN

The digitalization process involves the production processes as a whole. Large scale machine-to-machine communication (M2M) are integrated for increased automation, improve tracking of the products and monitoring of the process.

ORI Martin experience sees the convergence of M2M communication, robotics and machine vision in two main aspects of its steel production:

- **Product labeling**

ORI Martin tracks all its products by labels: billets, coils and bundles of bars

- **Plant monitoring**

ORI Martin monitors the EAF wearing by a daily internal inspection

A significant effort is spent to feed the M2M communication by **tracking** material and processes.

Are also WIP projects involving machine vision for **automatic qualification of defects** in products and **scrap identification**.



COILS LABELING ROBOT



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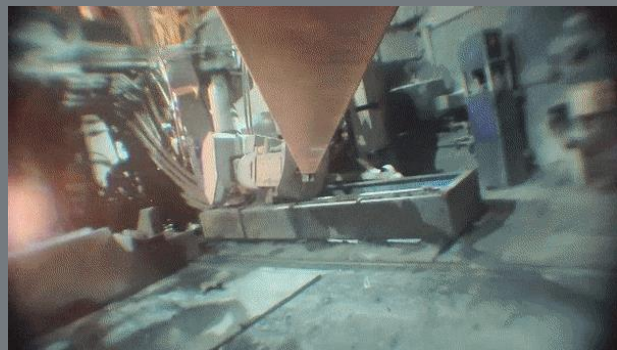
EAF REFRACTORY WEAR MONITORING

DIGITALIZATION, MACHINE VISION AND ROBOTICS IN ORI MARTIN

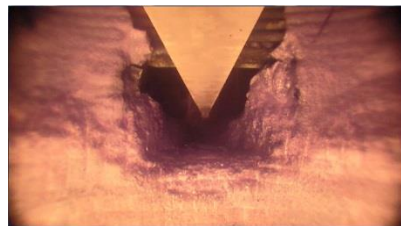
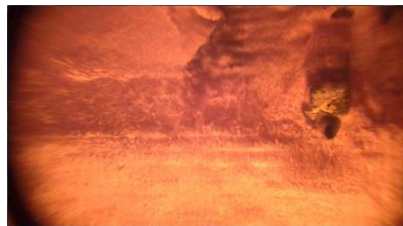
Digital technologies and robotics are powerful tools to implement integrated controls and performs very close reactions: very useful regarding the issue of process reliability and security.

- **EAF Refractory Wear Monitoring**

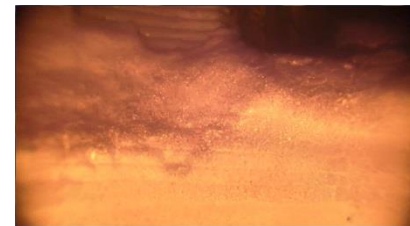
has been achieved using a dedicated tool applied to the EAF steel sampling robot. The internal EAF images are observed in real time and historicized.



EAF INTERNAL INSPECTION



EAF Slag Door side



EAF EBT side

