

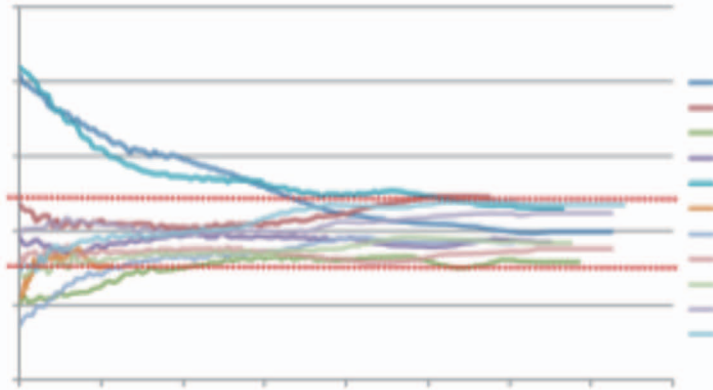


# IORTool

## Problem:

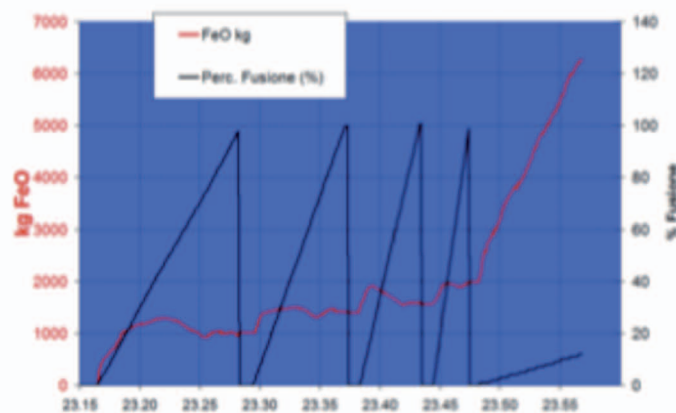
During EAF process, the modification of the O/C injections requests to maintain the bath/slag oxidation in the range of acceptable process targets.

**% FeO actual vs  
FeO Target**



## Solutions:

- The IORTool (Iron Oxide Ratio) links the off gas composition with a calculated mass balance of the process
- IORTool gives an indication of actual oxidation level and performs a prediction of final mass of FeO
- Operator can follow IORTool to control oxygen injection



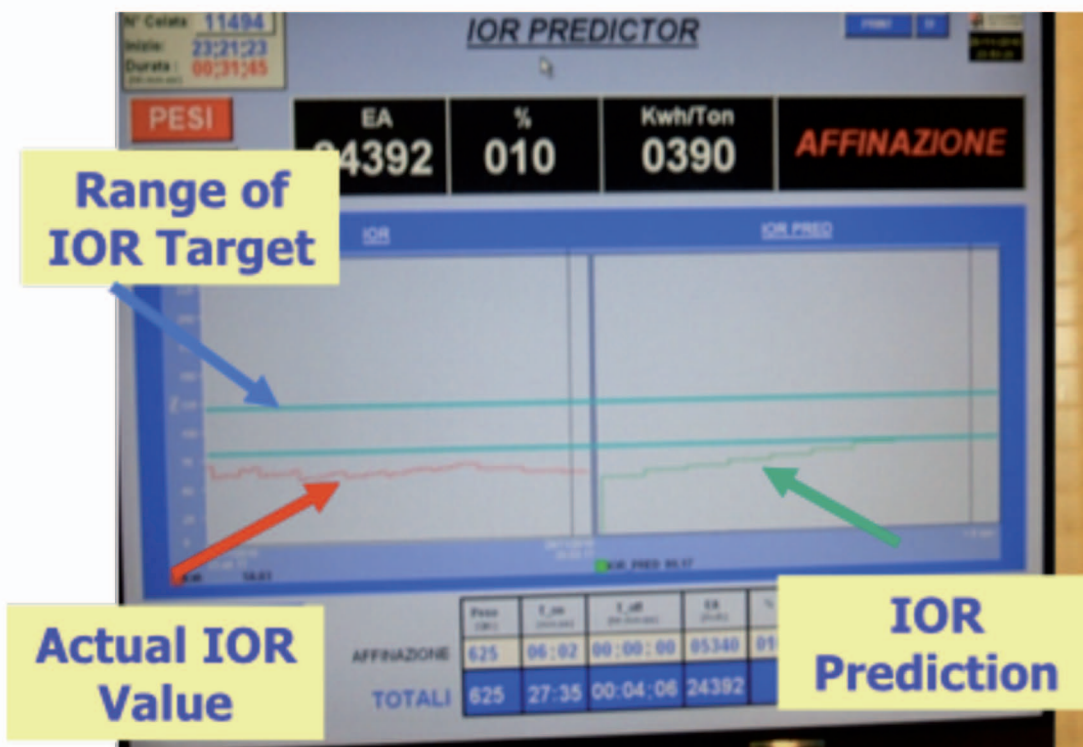
## - Benefits:

- Bath oxidation level during EAF process evolution.
- Increase metallic yield of the heat.
- Reduction of oxygen consumption.
- Uniformity of heats results in respect of production targets.

# IORTool

Industrial Equipment Arrangement:

- IORTool can be installed as a stand alone tool coupled with the EAF control system
- IORTool needs sensors for detection of off gas composition, temperature and flow rate installed
- If sensors are not installed, correlations has to be defined for the specific EAF
- Off gas mass flow rate and temperature at IV hole can be obtained by virtual sensors while composition at IV hole, mass flow rate, temperature and composition downstream need installation of online sensors



IORTool uses EAF L2 data: off gas composition, injections, charge mix, and water from electrode cooling.

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