



POR FESR 2007-2013, Action 1.1.2

Veneto, a region of Europe

In December 2012 ProService started a research project in the metallurgical field that sees our company acting as supplier of a process control software and having, as partner, Zardo Foundry, which will deal with the production process and the data collection. As external partner, the project sees the collaboration also of the Department of management and Engineering of the University of Padua, that will be in charge of finding the correlation among the production data. The research program is funded by the Veneto Region, within the 2007-2013 Regional Operative Program, in relation to the regional objective “Regional Competitiveness and Employment”, and has the following title:

“Analysis of the external and internal variables affecting the development of macro-shrinkages on nodular and grey irons and creation of a software for the charge optimization and the process control”

The project has the main objective of supplying foundries with a tool for a more accurate forecast of foundry defects, through the integration of the data coming from different sources (labs, plants, ITACA8™, ITACA8 MeltDeck™).

The research program consisted of 2 stages, each one with a length of about 5 – 7 months:

1. implementation of a complex system for the data collection and the process control, which is able to trace and record the production data (sands analysis, data coming from the moulding plant, temperatures and ITACA Melt Deck™ analysis on melting and waiting furnaces, temperatures and ITACA8™ analysis on pouring furnaces, inoculation quality through optical control tools, chemical data coming from the spectrometer / LECO,...), aggregating them per each production batch;
2. thanks to the collection of a great amount of production data during the stage No. 1, it has been possible to implement a new software (ITACA8™ Quality Check), which is able to forecast (by nonlinear regression algorithms) in a more and more reliable and accurate way the defects formation for every kind or family of castings, according to an auto-learning logic.

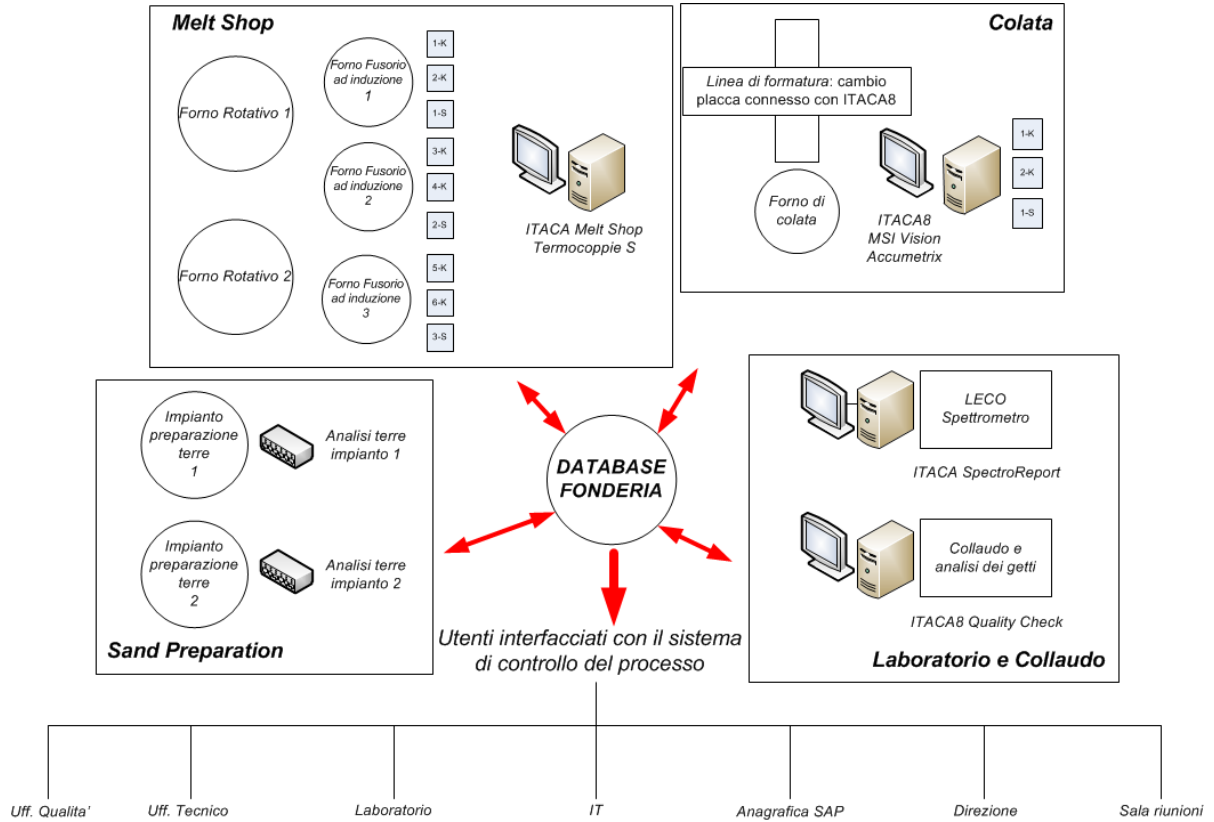


Figure 1: Scheme of the project



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