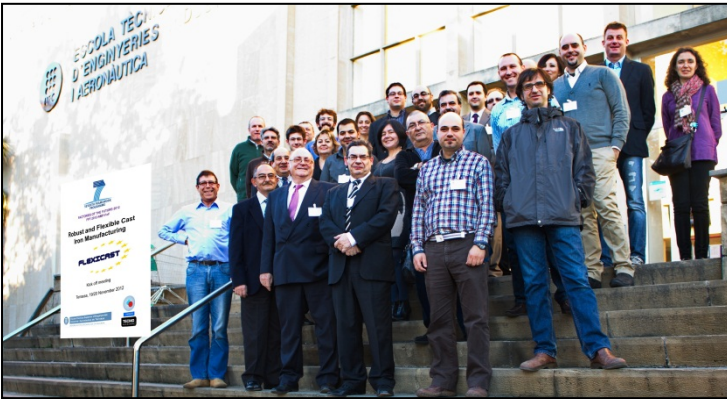


FLEXICAST PROJECT



The 1st of November 2012 it has officially been started FLEXICAST, a research project funded by the European Union under the Seventh Framework Program. The acronym FLEXICAST means “Robust and Flexible Cast Iron Manufacturing” and ProService is one of the 13 partners. This project, with a total budget of € 9.25 M, presents knowledge-based technologies that aim to follow the

way to transform the conventional (batch-by-batch) foundry process into a flexible (mold-by-mold) process. The proposal technologies will be applicable not only to new cast iron foundry lines, but also will be readily available to be retro-fitted to existing plants.

The specific objectives of the project are:

a) A cast iron production cell. Realization of an autonomous production cell as a demo unit, which puts together melting, treatment and pouring sub- processes cell, and remove transfer and treatment ladles (Fig. No. 1).

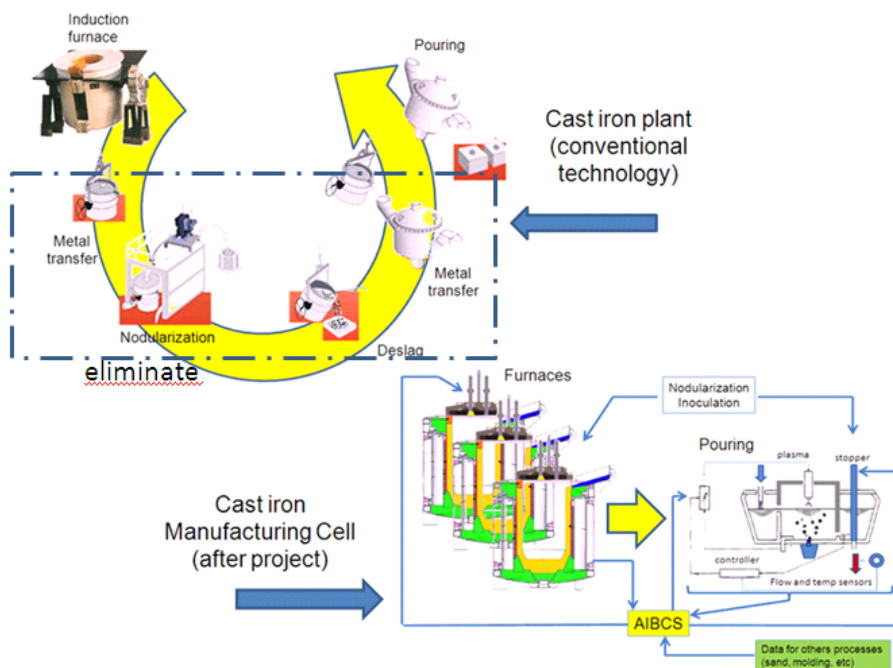


Figure 1: Production cell in FLEXICAST

b) Integration of Artificial Intelligence-based Control System. Based on the current demands in the metal casting industry for advanced and “intelligent” computing architectures, the project focuses on the implementation of a software platform that integrates Data gathering and Statistical Process Control Systems, Artificial Intelligence Systems (decision-making tools) and Sensors/Devices (among others: melting and pouring temperatures, chemical composition, DTA parameters, sand parameters, quantities and velocities of inoculant agents), in order to control the new cast iron manufacturing cell.

c) A robot cell for automated cast iron manufacturing processes. It is focused on the automation based on robotics for foundry process improvement. The project proposes to develop an affordable system having the versatility to perform an automatic test samples pick-up cell and an equipment to carry out all of the four most important operations: fettling, studs grinding, flash removal and surface upgrading.

d) Prototypes and pilot implementations in real industrial settings. The main goal is to demonstrate a clear breakthrough using project development in comparison to the state-of art solutions.

The project is coordinated by Labson UPC (Universitat Politècnica de Catalunya) and Fundiciones de Roda, a Catalan company that is part of the Grupo Roquet. ProService participates in quality of iron foundry process expert. For more information see <http://flexicast-euproject.com/>