

Intelligent control station for improved quality management in flat steel production by a next generation decision support system



PROJECT DETAILS

Funding Programme:
Research Fund for Coal & Steel

Sub-Programme:
Steel Research

Funding Scheme:
Research Project

Project Reference:
00037;
UE-12-RFSR-CT-2012-00037

Project Duration:
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to 2015-12-31)

Total Project Value:
€ 1.243.745

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€ 746.248

Funding to UniOvi:
€ 157.546

Website:
<http://www.percro.org/node/749>

PROJECT DESCRIPTION

The main objective is to develop an “Intelligent Control Station” as a powerful support of the personal in the control stations of rolling and finishing mills by an intelligent system and in a through-process fashion, which can automatically evaluate the product quality and give suggestions for further treatments of the coil, taking as well technical/commercial as environmental aspects into account. In detail the project will focus on the following points:

- Design and realization of an improved rule-based system to support the responsible people not only in the detection of bad quality coils but also in the detection of products with superior quality that could be re-assessed in order to get an added value by rerouting them to a proper final application.
- Development of new solutions for the IT-based storage and automatic monitoring of applied manufacturing specifications and their accordance with the target specifications.
- New solutions to define improved target manufacturing specifications by means of the analysis of the reached product quality and the applied manufacturing specifications.
- Definition of environmental specifications and environment KPIs to evaluate the environmental impact of each process.
- Development of new techniques to find optimal solutions between the environmental impact of the treatment of a coil and the technical/commercial aspects like delivery time, possible customer rejections or production costs.

The overall aim is to increase the yield of the production and the quality of the products taking into account the environment impact.

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