

Introduction

ArcelorMittal Etxebarri decided to carry out the implantation project of SIAS system (Automatic Surface Inspection System) in the Electrolytic Tinning Line N°1 and Electrolytic Tinning Line N°2. This project was awarded to Ingeteam Industry in two different phases.

In the Electrolytic Tinning process, marks and superficial defects can take place in the strip due to the deterioration of the rolls responsible of the transportation of it, which would result in the strip rejection.

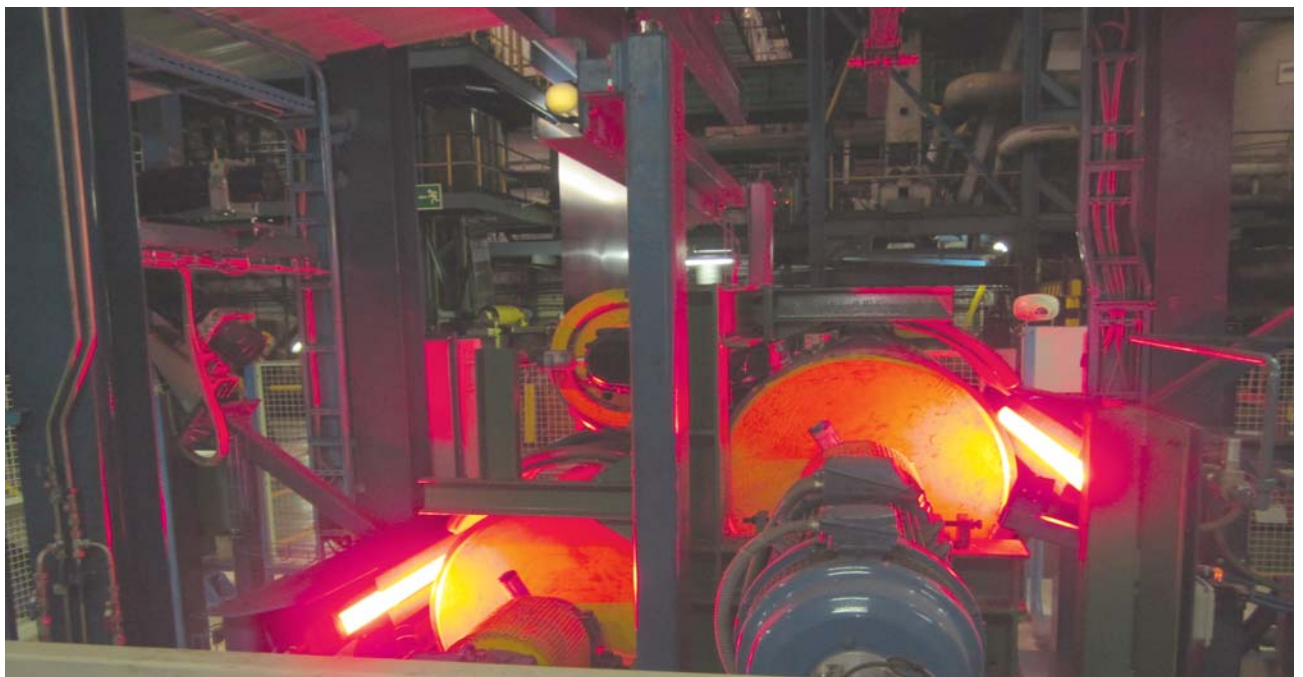
The SIAS systems are a possibility to improve these processes. The implementation of this technology allows an objective inspection of the totality of the production, increasing the product quality and reducing the production costs, existing ulterior inspection and cleaning up.

The system consists of a cell equipped with a strip of infrared LEDs and lineal camera that captures coil sections in images that are pre-processed for the defects and finally classified.

- In 2010 there was carried out the electromechanical implementation project of the SIAS system in the Electrolytic Tinning Line N°1. This system was installed after the exit accumulator.

- In 2011 there was carried out the electromechanical implementation project of the SIAS system in the Electrolytic Tinning Line N°1. This system was installed between the oiler and the Bridle N°3.

In both cases, there was designed a structure, in whose top part is located a robust platform to place the camera systems and SIAS lamps, as well as auxiliary support and electrical boxes. It could be provided a deflect roll in the exit area, depending on the final embrance angle obtained with the exit camera of the SIAS.



Scope of Supply

Ingeteam Power Technology S.A., Industrial Systems Division is responsible of the following supplies and services, in the Electrolytic Tinning Line n°1:

- Project management.
- Basic and Detail Engineering.
- Supply of the following equipments:
 - * New rectifier and dc/ac inverters for the new line drives (Sinamics S120 from Siemens).
 - * Existing AC MCC expansion (New starters and auxiliary feeders).
 - * AC gearmotors.
 - * Peripherals / Sensors.
 - * Local control panels.
 - * New additional hardware for the existing PLC (Sisteam OCS from Ingeteam Group).
 - * Remote I/O units (ET200 de Siemens).
- Modifications in the existing PLC SW.
- Modifications in the existing HMI SW.
- New safety fences.
- Electrical Erection.
- Erection Supervision.
- Commissioning.

Control Diagram

