

## **AIC completed the modernization at Ferriera Valsabbia in Odolo, Italy.**

Automazioni Industriali Capitanio (AIC) completed the modernization at Ferriera Valsabbia in Odolo (Italy) by improving the Roughing Mill Safety and replacing the Rolling Mill CPU.

The Roughing Mill Safety was increased by the integration of new protection gates to the stands with 3 different safety levels depending on the access type required by the operator. Particularly, two new SafetyBoxes were installed to divide the stands into two groups (S01->S07 and S08->S11) from which it is possible to set the access in three different modes:

- ENERGY 0 –Both the electric (the motor) and the hydraulic (the handling) are secured.
- STAND CHANGE – only the electrical part (the motor) is secured, so it allows perform the stand change and different types of maintenance.
- TESTS – It allows the machine to operate in the NOT safe mode that can be set in motion only via JOG by using the knob connected to the SafetyBox. This mode can be selected for the sample test, the warming up of roll canals or the problem removal. The access is only available when production is stopped.

Moreover, it allows to manage the control in JOG of one or more stands directly in the field, although previously it was only possible from the pulpit that potentially dangerous for the employees in the field.

In order to manage new SafetyBoxes and access safety procedures, PILZ PLC Software modifications were performed. Also, the Rolling Mill PLC (RACS) Software was configured to integrate the new JOG stand control point (the safety knob) and the interlock of the existing JOG control points (the main pulpit, the radio control and the old local pulpit).

Each of the two new Safetyboxes +PN06 and +PN10 also included the following elements:

- 1 PILZ PLC node.
- 1 emergency button.
- 1 fortress key release with the 5-key distributor.
- 3 buttons for the access mode selection (ENERGY 0; STAND CHANGE; TESTS).
- 7 or 4 stand selection buttons for JOG.
- 1 JOG command knob.

The Rolling mill CPU replacement included the hardware (and firmware) update of all the CPUs present in the Rolling Mill. Precisely, all ROCKWELL CPU 1756-L61 models (dated 2007 and 2008) were replaced with the new 1756-L81E and 1756-L82ES ROCKWELL models) and CPU Safety (L82ES) was chosen to prepare the system for the possible future elimination of the current PILZ safety PLCs.

As part of the project, the following modifications have been made:

- Update of all software from versions 16 and 19 to the latest version 32;
- Adaptation of the new versions (e.g. the network configuration, the error correction, etc.);
- Replacement of the old CPUs with the new ones;
- Firmware update of network and smart cards;
- Elimination of Ethernet cards dedicated to SCADA / Recipe books / IBA;
- Reprogramming Controlnet networks (both local to the individual CPUs and the global data exchange network);
- SERVER-PLC connection update (SCADA, Recipe systems and various Data Bases).

The new CPUs perform better and provide the possibility to manage easier any Software additions.

The modernization was performed during the winter holidays shutdown.

### **AIC Automazioni Industriali Capitanio sites:**

- Italy (Headquarters, Engineering & Workshops)
- United States of America (Sales & Service)
- India (Sales, Engineering & Service)
- Brazil (Sales, Engineering & Service)



AIC is a global system integrator providing advanced and tailored automation and robotic solutions for the steel industry, with the aim to continuously improve both efficiency, competitiveness and safety of the production processes. With more than 1000 applications worldwide and more than 40 years of history, AIC can boast a unique experience in both greenfield and revamping projects in meltshops and long products rolling mills.

Ferriera Valsabbia S.p.A. is one of leading European producers of steel products (billets and rebars). The products comply with the main national and international regulations and quality standards. The serious and passionate work, the awareness of belonging to an organization intent on improving the environment and the life of the whole community are the values that have shaped the development of Ferriera Valsabbia from 1954 to the present.

This press release is available at

- <http://www.aicnet.it/rassegna-stampa/>

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