

New drives for bar mill in Iowa (USA)

AIC North America Corp. is just awarded for bar mill improvements at a Rolling mill site in Iowa, USA. AIC technologies will include all-new DC drives for the rolling mill stands and shears, and AC drives for auxiliary machines, including the safety improvements on LOTO procedures by the use of GuardLogix PLC local safety boxes with trapped keys.

Indeed, up-to-date 17 ABB DCS880 drives panels, handled by the safety lockout station, will be fit into the mill's current footprint. Moreover, all necessary modifications will be performed to quickly establish communication within the automation system logic and the HMI interface.

The scope of supply includes PLC Allen Bradley ControlLogix5000 to control positioning for shears 1, 3 by dedicated axis control cards, auxiliaries and safety system and a PROFIBUS DP/DP coupler to communicate with the ABB RMC.

A reliable control system will be achieved by a local safety box that, communicating with the RMC system, will guarantee stands shutdown while Safety PLC will cut energy to the DC drive panels. After a series of security feedbacks per area, Safety PLC – showing power cut through a green light - will unlock a key for the operator and keep the area safe for accessing. As long as the key is removed, energy will not be restored.

This thorough solution will save operational losing time as electricians presence is not necessary and will prolong equipment lifetime as protection circuits will be exclusively used for their specific function.

The configuration has been designed after several visits to the site, developing specifications for the customer and conducting several meetings at the plant in order to define the best solution for the customer's necessities. AIC will also provide all technical specifications for local contractors to install all equipment at the site.



Figure 1 – Example of Main DC Drive Panel manufactured by AIC with DCS Converters and local control desk with safety functions.

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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 boost a unique experience in both greenfield and revamping projects in meltshops and long products rolling mills.

For more information:

- AIC Group: <http://www.aicnet.it/rassegna-stampa/>
- ATS Mechatronics: <https://www.ats.ud.it>
- LinkedIn: <https://www.linkedin.com/company/automazioni-industriali-capitanio>
- Facebook: <https://www.facebook.com/AICnet.it>
- Twitter: https://twitter.com/AIC_solutions
- YouTube: <https://www.youtube.com/channel/UCuHt-UjXoKViAXImXJl3q8Q>

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