

AIC has supplied advanced automation system upgrade for rolling mill modernization for Steel Dynamics Inc. in Roanoke, Virginia.

AIC has been selected to deliver the next phase of automation upgrades for the Steel Dynamics Inc. (SDI) Roanoke Bar Division rolling mill, located in Roanoke, Virginia. The project included the design, programming, testing, and commissioning of a new PLC and HMI software solution as part of the ongoing modernization of the rolling mill control system.

This phase represented the final step of a multi-stage upgrade initiative at the site, all implemented by AIC, and has fully replaced the existing ABB PLCs with Allen-Bradley ControlLogix-based systems. The scope of work included:

- Full development and implementation of new PLC logic for the rolling mill, shears (CV70, CV30, CVM05), and auxiliary systems
- Seamless integration with existing systems such as RHF and WTP
- Conversion and optimization of all existing logic for improved troubleshooting
- Interface with profile gauge systems

In parallel, a new server-client HMI system has been deployed, offering high-resolution screens, enhanced troubleshooting capabilities, and central supervision via ThinClient architecture, using ThinManager. Existing HMI projects have been migrated into the new application to ensure continuity and operator familiarity.

AIC has also integrated the existing iba system into the upgraded mill control architecture, enabling advanced real-time and offline data analysis through ibaPDA and ibaAnalyzer tools. This has improved diagnostic and operational efficiency.

Deliverables from AIC included all relevant technical documentation, wiring diagrams, and process control interfaces, ensuring a comprehensive and future-proof automation solution.



About Companies:

AiC Group is a technological partner with extensive experience and deep know-how and stands itself as a global power control supplier and system integrator designing, manufacturing, and implementing automation systems, process control, and mechatronic solutions for both greenfield and revamping projects. Focusing on the steel and metals industries for long and flat products, the Group provides cutting-edge technical solutions by handling complex project schedules and thus establishing satisfactory and remarkable partnerships through its 7 international offices, Italy, USA, Germany, Brazil, India, China and Czech Republic. 50 years of modernization for endless reliability processes.

SDI Steel Dynamics, founded in 1993, is one of the largest and most diversified U.S. steel producers and metal recyclers. Operating in the U.S. and Mexico, it uses a circular manufacturing model with electric arc furnaces and recycled scrap to produce low-carbon steel. Its operations span steel production, fabrication, and recycling, powered by dedicated, innovative teams.

For more information:

Katia Solvesi
Communication and marketing specialist – AiC Group
Email: katia.solvesi@aicnet.it
Tel: +39 0365 826333

