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Automation & Information Solutions

CASE STUDY

INTEGRATING SIEMENS PCS 7 SYSTEM TO ADVANCE MANUFACTURING

ATI built an advanced hot-rolling and processing facility (HRPF) in Brackenridge, Pennsylvania as part of its Specialty Rolled Products operations. The HRPF manufactures nickel-based alloys, titanium and specialty alloys, zirconium, and stainless-steel sheet and plate. At an estimated $1.2 billion, the HRPF is among the largest industrial projects in the United States, and among the most powerful hot-rolling facilities in the world.

Siemens Building Technologies awarded RoviSys Building Technologies (RBT) a contract as the systems integrator for Siemens Metals Technologies' Building Services (BS). RBT was contracted to integrate a Siemens PCS 7 system to control/monitor ATI's HVAC, lighting, security and fire systems. Each system is integrated into seven standalone Siemens PLCs via hardwired interface or BACnet or OPC communications. Custom BACnet-toProfiBus solutions were configured to interface with security, fire, lighting, chillers, VRFs, MES systems, safety PLCs and SILOC crane controls. Project scope: 3,500 hard I/O, 2,500 soft I/O brought in via 80 remote I/O panels and network connections to seven PLCs.

RBT's responsibilities included project management, network design, panel design, PCS 7 code design and configuration, subsystem interfaces, onsite project management and commissioning. Proven expertise in building automation and process allowed RBT to establish initial control methodologies, combining building automation best practices with robust PLC processors used in industry. Experts from RoviSys Building Technologies played key roles with customer and vendor interaction and schedule management.

The project team lead regularly interacts with Siemens mill-furnace control experts in Germany to integrate the BS PCS 7 distributed control system into a Siemens multi-project, consisting of multiple subcontractor projects. As a Siemens Solution Partner, RoviSys Building Technologies was uniquely qualified to integrate and deploy the powerful, reliable and flexible PCS 7 control system. RBT engineers will deliver a building-services system that meets all industrial controls standards and provides a seamless bridge between automation and engineering.

PROCESS & FACILITY SYSTEMS

- Fire Alarm
- HVAC
- Security
- Network Design
- Subsystem Interfaces
- Process Utilities
- Cooling tower & Chiller management
- Facility Lighting

PLATFORM TECHNOLOGIES

- Siemens PCS 7 as master SCADA system
- Siemens XLS fire-alarm panel
- Fusion Security System
- Custom BACnet lighting-control panels
- FieldServer - convert communication protocols to ProfiBus
- Carrier chiller
- HVAC VRF controls
- Heat-trace controls
- MES systems
- Safety PLCs
- SILOC cranes

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