WinCC based data handling system

Solution Partner:  Prism Systems, Inc
Mobile, AL

Customer:  IPSCO Steel
Segment:  Metals

Project Requirements:

IPSCO Steel maintains order and quality data in a Level 3 database. This data is needed to select plates for processing in the Heat Treat Area. Also, as data is collected during the process it must be tracked with each plate and archived back to the Level 3 database. Tightly coupling these systems was the goal of this project.
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Implementation:

Six S7-400 PLCs control the Heat Treat Area. These use WinCC as the operator interface. Tables were created in WinCC’s underlying SQL Server database to hold plate information. The Level 3 Sybase database holds PDI data about each bundle of plates. This data is required by the crane PLC to automate loading of plate on the line and by the line for proper processing. Once the plate is loaded on the line, over 200 process data points are collected throughout the process and must be accurately transmitted back to Level 3. To this end, data is constantly monitored and alarmed if necessary.
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Solution:

The Siemens solution for this project maintains consistency with plant standards and provides the level of robustness demanded by the steel industry. By implementing the project using a Certified Solution Partner, IPSCO is assured of a qualified integrator. In this case, the engineer was also individually certified on S7 processors through Siemens.
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Benefit:

By automating the crane loading the Heat Treat Line, IPSCO is able to reduce their man-hours per ton rate and also generate less data errors. Tracking of process parameters and energy/water usage per plate of steel provides many opportunities to better understand their process and reduce costs/improve quality. The robustness of the system prevents the corruption of data that can happen with line upsets and outages.