Ethanol Plant Fully Modernizes APACS+ to PCS 7 DCS

Solution Partner: Trident Automation Inc., Wisconsin, USA
Customer: Leading Biofuels Producer, Midwest USA
Segment: Biofuels

Requirements of the customer:

- Improve the process visualization navigation, trending, and alarm management
- Provide tools that help the operations team focus on the KPIs
- Integrate production information with the process control system
- Improve historian trending and storage to data
- Improve access to the information both locally and remotely with secure access strategies
- Improve system reliability and performance including software, industrial security and workstation performance
- Minimize downtime during modernization
- Improve interlock visualization and manipulation from the HMI
- Better interface to 3rd party PLC’s (Grains, Meth, DDE, COE, …)
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Implementation by the Solution Partner:

- Migrated OEM installed APACS+ Wonderware based HMI system to PCS 7 with ET200M IO.
- APACS+ Discrete IO termination MTA remained and connected via cabling interface to PCS 7 ET200M discrete IO keeping the field IO terminated.
- Upgraded APACS+ Analog IO to PCS 7 ET200M HART IO to improve diagnostics and asset data.
- Migrated legacy historian data to new PCS 7 Process Historian.
- New Siemens industrial PCs with current Windows OS.
- Added SievePAC to enhance and improve mole sieve control.
- Modified Dryer controls to switch between ratio and cross limiting modes.

Benefits for the customer:

- Entire system migration from cold outage to production testing in 3 days. Trident leveraged the installed APACS configuration and graphics – applying their intimate knowledge of the platforms and industry to minimize the project risk, cost and burden on the customer.
- Trident created intuitive HMI, alarming and trending that improved the operator experience.
- Minimized the need for re-training by leveraging best practices.
- Integrated data from process and lab including KPIs for production information dashboard.
- Optimized local/web visualization of reports and production data.
- Visualize permissives and Interlocks with first out indication.
- Custom sequences to facilitate consistent operation.