



Case Study

Modern DCS Process Automation

Industry

Lubricants & Petroleum

Application

Batch, Modern DCS, Historian

Solutions

PlantPAX, FactoryTalk Batch, FactoryTalk View, FactoryTalk Historian, ControlLogix, Thin Manager, Hyper-V

Benefits

Increased efficiency due to shorter batch times, reduced energy consumption, and improved utilization of skilled operators; Improved quality through repeatability; Improved customer satisfaction due to availability of quality data

The Challenge

When sales exceeded capacity for a privately owned grease and lubricant manufacturer, the company decided to invest in a new manufacturing facility. Keeping in mind its 175 years of delivering world class performance, the company partnered with McEnergy Automation to implement a Modern DCS system. Management had a cautious approach toward automation due to limited exposure to its use in their existing plant. They did, however, recognize that automation would allow them to continue to deliver world-class-performance products while remaining competitive. Extra effort was required to assist customer personnel in transitioning from a manual operation to a fully automated system, and to help them understand how automation would provide benefits through increased reliability, quality, efficiency and flexibility.

The Solution

McEnergy Automation worked closely with our customer to fully understand their needs and concerns, and then defined and implemented a control architecture that fit their immediate needs and was scalable for planned future growth. Our engineers were responsible for the specifications of motor control centers, control panels, PLC hardware, and HMI architecture, as well as the development of the batch automation system, network architecture, and virtual environment architecture. The new control system consisted of Rockwell Automation's **ControlLogix** controller, **FactoryTalk View SE** as the primary operator interfaces and **PanelView Plus** terminals for task-oriented functions. McEnergy Automation leveraged the capabilities of Rockwell's **FactoryTalk Batch** with *Archiver* and *Reporting* for batch control, extensive recipe management, and batch data tracking, storage and reporting. **FactoryTalk Historian** was used to collect and store process data for all continuous processes in the system. McEnergy Automation's use of Rockwell's **PlantPAX** library of process objects delivered consistent programming and graphic objects which reduced implementation costs and minimized operator training needs. ACP **Thin Manager** and thin clients were configured to provide HMI terminals for the operators in a harsh physical environment. All software was installed on a virtualized server system using **Microsoft Hyper-V** technology, in a "High Availability" configuration to provide increased reliability and performance.

The Results

Our customer saw immediate increases in production, capacity, and efficiency. Batch times were reduced by as much as 75%, while also reducing staffing needs and energy consumption. Due to easy recipe changes and a modular system design, the customer is now able to quickly react to changing production requirements and market demands. Easy access to actionable process information for management and operations has resulted in ongoing process improvements. Remote monitoring and reporting capabilities have saved time and labor for production supervisors. Batch quality data has strengthened their relationships with their key customers. After seeing these impressive results, our customer plans to expand this scalable automation solution to other production areas.