

Case Study

Calumet Specialty Lubricants Provides Remote Boiler Control with HC900



With our new boiler project, Honeywell provided a solution that is simpler to manage, without the multiple layers of software and licenses we had experienced with a competitor's product.

- Brian Hollis, Reliability Engineer, Calumet Specialty Lubricants, Princeton, LA

Benefits

When Calumet Specialty Lubricants initiated a new Burner Management System (boiler project), it included the Honeywell HC900, CS900 and transmitters. The new boiler project introduced a programming environment that uses function blocks, an approach that was unfamiliar to Calumet plant personnel.

However, Calumet engineers were aware of the industry trend toward function blocks. Using function blocks in the design of control software has many benefits including improving software quality and productivity, reducing training requirements and increasing reusability.

Calumet engineers realized that the benefits of the new system would also include the ability to provide remote boiler control in the control room through a web browser.



The Princeton refinery has aggregate crude oil throughput capacity of approximately 10,000 bpd.

The Honeywell solution has changed how work is conducted at the Calumet facility. The simplified programming does not force engineers to configure data through the other plant PLCs.

The Honeywell solution provides a more streamlined software architecture and licensing approach than the previous system.

Background

Calumet Specialty Products Partners, L.P., (NASDAQ: CLMT) is a master limited partnership and a leading independent producer of high-quality, specialty hydrocarbon products in North America. Calumet processes crude oil and other feedstocks into customized lubricating oils, solvents and waxes used in consumer, industrial and automotive products. Calumet also produces fuel products including gasoline, diesel and jet fuel. Calumet is based in Indianapolis, Indiana and has twelve facilities located in northwest Louisiana, northwest Wisconsin, northern Montana, western Pennsylvania, Texas, New Jersey and eastern Missouri.

Challenge

Calumet Specialty Lubricants needed to upgrade the controls for one of its boilers. The boiler was previously controlled by Allen-Bradley PLCs and a Foxboro DCS.

"The HC900 was presented as a part of the complete package, and it is based on a programming environment that was unfamiliar to our plant personnel (function blocks), but we recognized that the entire industry is moving toward function blocks.

The addition of the CS900 panel gave us the ability to have remote boiler control in our control room,” said Brian Hollis, Reliability Engineer at the site.

The justification for making this choice included the excellent track record of the Honeywell HC900 system and the dedication and response of the local Honeywell services personnel.

Solution

The control design of HC900 process and safety system reduces hardware and software costs, training and support needs, and the requirement for spares, thereby bringing significant cost savings to users. The HC900 SIL2 system is an ideal fit for applications where plant and operations need to be brought into safe state quickly in case of adverse operating conditions.

The HC900 is an advanced process and logic controller offering a modular, scalable design that is sized to meet the automation needs of a wide range of process equipment.

A touch screen operator interface provides user-friendly pre-built or custom displays, along with trending, data archiving and a host of other capabilities. A selection of controller CPU modules, multiple I/O rack sizes and multiple local or remote I/O process racks per system provides a flexible architecture that can accommodate the most demanding application.

Modularity, built-in redundancy, versatile I/O configuration and connectivity, plus the ability to configure complete process solutions and archive their program parameters for easy retrieval and implementation, permits customized pinpoint control.

The HC900 Designer software used for controller configuration is a Windows-based application that uses graphic objects to represent function blocks, greatly simplifying control strategy development and improving configuration recordkeeping.

The Station Designer software used for configuration of the operator interface is conjoined with HC900 Designer software through database import functions that greatly simplify user interface display development.

The HC900 control system installed in the Calumet Specialty Lubricants plant consists of C50 processor, 6 I/O cards and 8 slot rack. Also integrated into the solution is a 15” CS900 Display.

HC900 Process and Safety System – A solution for process control and safety related applications.

For More Information

Learn more about how Honeywell’s HC900 control system can help to improve reliability and productivity, visit our website www.honeywellprocess.com or contact your Honeywell account manager.

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