

Ultramar Implements Experion PKS at Leading Canadian Refinery



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Richard McCormick, Automation Group Supervisor, Ultramar

Benefits

Ultramar implemented a new Experion® Process Knowledge System (PKS) at its Canadian refinery. This technology evolution toward Experion has resulted in the following benefits:

- Complete investment protection over system lifecycle (integrates with existing TPS)
- Seamless integration with other Honeywell and non-Honeywell control technology and subsystems
- Connectivity issues time cut from days to hours due to system openness
- More efficient operation schematics
- Easy to configure and more powerful control loops



The Jean-Gaulin Refinery near Quebec City uses state-of-the-art technology for crude oil processing of 215,000 barrels per day.

Background

As a wholly-owned subsidiary of Valero Energy Corporation, the largest refiner in North America, Ultramar is one of the largest employers in Eastern Canada with more than 3,500 employees.

As a leading refiner, Ultramar places great emphasis on respecting security, safety, and the environment. In the control room at the refinery, instruments measure, record and modify temperature, pressure and flow settings in each unit. Skilled laboratory technicians perform hundreds of analyses on crude oil, semi-finished and finished products. Across the refinery a staff of 60 specially trained technicians and a battery of highly sophisticated equipment are on site to prevent and fight against any incident that could occur. The refinery also employs the latest equipment and technology to provide superior environmental protection.

Challenge

In the fall of 2004, Ultramar had two new units coming online and needed to find an appropriate control system. One unit was for enhancing octane and the other was used to remove sulfur in order to meet new specifications for gasoline.

“At the time we had a choice to use our existing TPS system and add to our aging infrastructure or upgrade to a more improved and newer technology that could help optimize plant operations,” said Richard McCormick, Automation Group Supervisor, Ultramar. Besides replacing the TPS system with a more versatile and easy-to-use system, the company needed to find a way to leverage the existing TPS system already in place.

Solution

Ultramar assessed the situation, evaluated the various technologies on the market, and ultimately selected Honeywell's Experion PKS for its ability to quickly and seamlessly integrate with its existing TPS system while leveraging and retaining the company's investment in its control systems.

Ultramar was also impressed with Experion's capabilities for high-level integration with a variety of Honeywell and third-party equipment, subsystems and software.

Another deciding factor was Honeywell's Profit Loop, a superior technology that delivers improved process profitability and simplified loop tuning to reduce maintenance costs for model-based applications in the controller itself.

"The technology was evolving very fast and we realized that we needed the newest and most advanced products available, and Honeywell provided what we needed," said McCormick. "On the other end, we must keep control systems fully reliable. We found Honeywell developed a great (and necessary) product with its Fault-Tolerant Ethernet (FTE) network, and still provided full redundancy from servers down to the field instruments controller's input-output cards."

Ultramar also recognized the future value of investment in Experion PKS and its ability to immediately begin the startup phase with Honeywell's experienced commissioning team. "Honeywell's professionalism and above all, their understanding of customer needs are important strengths that were greatly appreciated by the Ultramar automation team as well as our operations staff," said McCormick. "Our experience with Honeywell was a true team effort resulting in a successful implementation of a powerful and full-functioning control system that integrates directly into our existing TPS system. In fact, we are considering upgrading our entire system to Experion with the passage of time and further integration efforts. We have requested that Honeywell improve a few aspects of it, like adding some interesting TPS system features. This would fully satisfy operators' needs and further help in our migration plan."

For More Information

To learn more about how Experion PKS can improve your business performance and peace of mind, visit www.honeywell.com/ps or contact your Honeywell account manager.

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SS-05-014-ENG
October 2005
Printed in USA
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