Case Study

DuPont Experience Continues Safety Manager Implementation

> "We are in the process of implementing the safety system in many remote locations. This is a multi-million dollar project with complex interfaces using different protocols and communication parameters."

> - Gabriel Rivera, Process Control and Automation Engineering Consultant, DuPont

Background

For more than 200 years, DuPont has brought world-class science and engineering to the global marketplace through innovative products, materials and services. Their market-driven innovation introduces thousands of new products and patent applications every year, serving markets as diverse as agriculture, nutrition, electronics and communications, safety and protection, home and construction, transportation and apparel.

Today, DuPont builds on its heritage by partnering with others to tackle unprecedented challenges in food, energy and protection now facing our world. With global population expected to approach nine billion by 2050, DuPont is working with customers, governments, NGOs and thought leaders to discover solutions to today's toughest challenges.

Safety in DCS installations is important to DuPont, and Honeywell's Safety Manager was a clear leader when DuPont engineers began to focus on reliability in one of their acid plants.

Benefits

Safety Manager minimizes incidents, maximizes production uptime, reduces the cost of compliance and manages plant safety. It is targeted at a wide range of industries, including hydrocarbon processing, chemicals, oil and gas, and energy production. The latest version of Safety Manager offers even closer integration to Experion®, HART pass-through data integration to Field Device Manager

(FDM), and a new I/O module supporting control in the field: the Universal Safety Logic Solver.

Safety Manager enables compliance with plant safety standards, better system reliability and increased process uptime that lead to a safe production environment and operational savings. Universal Channel Technology and Universal Safety I/O enable Universal Cabinet designs to be standardized, significantly reducing engineering cost and schedule when applied broadly across a project. This approach is ideally suited to highly distributed applications such as oil and gas upstream applications, and reduces cost while increasing availability and efficiency.

Challenge

This multi-million dollar project deals with a system with thousands of I/Os and complex interfaces, multiple batch equipment interfaces, different protocols and communication parameters, with multiple vendors. DuPont needs to design a safety instrument system to protect the safety and reliability of the operation.

Solution

"We are using the Honeywell virtualization solution right now for offline product development and configuration development. Once the configuration is ready, we will transfer that to the real system. We are planning to use some of the virtual servers to help with some of the HMI development, as well," said Gabriel Riviera, Process Control and Automation Engineering Consultant for DuPont.

Results

Riviera explained the expected business results in terms of the most reliable process control system, able to keep with new technology. "Technology has evolved over the last few years and we have different challenges. We need to

interface with new vendors and new process control equipment. Right now, Honeywell is the best solution in order to help us get the system connected right the first time," he said.

About Honeywell Safety Manager

Safety Manager integrates process safety data, applications, system diagnostics and critical control strategies, and executes SIL-defined safety applications in a fully redundant architecture. Safety Builder, an intuitive and comprehensive configuration tool, provides plant-wide management of safety-critical databases and application programming for easy network design. Universal Safety I/O enables maximum architectural flexibility and lowest cost of ownership when safety is required at distributed locations. Based on Universal Channel Technology, its unique feature allows each channel to be configured individually to a different I/O type, eliminating the need for marshaling cabinets, home run cables and junction boxes at remote locations.

With Universal Safety Logic Solver, safety application can be distributed into the field close to the process unit while maintaining a transparent overview. In addition to being an I/O module to Safety Manager, the Universal Safety I/O module is unique in also being able to execute the safety application locally, safeguarding the process in the event communications to the Safety Manager are interrupted.

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