

Schneider Electric products provide networking flexibility

Introduction

This customer is one of the nation's leading processors and distributors of milk and other dairy products, and a leader in the soy foods and specialty foods industries. They are a powerful force in the food and beverage industry, ready and able to meet the needs of their customers and consumers in the new millennium.

Application

The existing system was all manually adjusted and controlled. It was costly to maintain due to the down time needed to perform routine required product changes. Efficiency issues arose while transferring from one process section to the next to change-over to the desired product. The old system wasted raw material; this could not be tracked for evaluation purposes to recommend efficiency improvements and increase profits.

The project scope is to replace one process area at a time. During the change over, the system is incorporating manual control with automated control development, eventually resulting in total automated process control.

Objective

The plant location is in a key location for the products they make. Management decided this plant was their target for updating and automating the process control to increase manufacturing output and profit margins:

- Decrease the waste of raw material while improving manufacturing time.
- Reduce cost by adding new and replacing some links within the ModBus® network. The existing system utilizes some PLC control communicating through the network and there have been communications issues in some areas due to location requirements. The retrofit will incorporate Ethernet communication; hardware will added to enlarge and replace the communications links where the issues have been identified resulting in lower overall cost.
- Reduce cycle time with the new control system, which will also more efficiently transfer the raw material from one section of process to the next. The new system will also address the issue of tracking, reporting and evaluating raw material waste



INDUSTRY

Food & Beverage

OBJECTIVE

Decreasing the waste of raw material, while improving manufacturing time.

SOLUTION

The system was designed to easily upgrade their existing PLC control technology without reprogramming the entire application. Through utilizing the same manufacturer's products, their learning curve was reduced.

BENEFIT

Maintenance personnel were better able to monitor and get alarms from different areas in the plant. This allowed them to respond more efficiently reducing down time and waste of raw materials.

COMPANY PROFILE

This customer is one of the nation's leading processors and distributors of milk and other dairy products, and a leader in the soy foods and specialty foods industries.

Solution

The system included Altivar® Drives, Modicon® Quantum™ PLC Hardware, Magelis® Operator Interfaces, Concept™ Software and Vijeo Look Software. The products utilized gave the greatest of flexibility in networking them together while utilizing one manufacturer. The customer wanted to network everything together for greater flexibility in monitoring and maintaining their processes.

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The system provided open communication architecture through Ethernet by networking the new products while still being able to communicate with the existing ModBus Plus communication network.

Benefits

- Maintenance personnel were better able to monitor and get alarms from different areas in the plant. This allowed them to respond more efficiently reducing down time and waste of raw materials.
- Better usage of their raw material reducing waste.