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One-day Switchover Turns into Profit Increase / Nisseki Chemical Texas, USA

Location: Texas, USA
Order Date: 2002
Completion: 2003
Industry: Petrochemical

About Nisseki Chemical Texas Inc.

Nisseki Chemical Texas Inc. is a wholly owned subsidiary of Nippon Petrochemicals Company Ltd., which is the petrochemical division of Nippon Oil in Japan. The company was established in 1989 and the manufacturing plant was started up in 1994. Nisseki Chemical Texas Inc. was initially founded to produce a high voltage electrical capacitor fluid and a solvent that is primarily used in the manufacture of carbonless copy paper. Additional products have also been developed and the company now makes a variety of specialty chemicals and chemical intermediates.

Background of This Project

Nisseki Chemical was using a distributed control system (DCS) from another supplier but was dissatisfied with the huge costs that were being incurred to upgrade and maintain this system. To improve the productivity of the plant, the company made the decision to replace this legacy system and to do so with minimum disruption to its operations.

The Customer's Challenges

Against the above mentioned background, the customer faced the following challenges:

- Was using a legacy system that was becoming increasingly expensive to operate
- Needed to turn into profit increase
- Had to complete the replacement project in a short time

What the CENTUM CS 3000 Solution Contributed

1. Not a single wire touched

Yokogawa offered to migrate Nisseki Chemical to the world renowned CENTUM CS 3000 without touching a single wire in the field. This migration solution to a state-of-the-art control system was low cost, low risk, and cost effective. Due to the need for a rapid turnaround in this project, the cable switching was done within one day. No field re-wiring was required thanks to the use of a fully compatible field terminal assembly (FTA) board.

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2. A simple and cost-effective migration solution

With Yokogawa's migration solution, Nisseki Chemical's legacy controllers and process interface units were replaced with CS 3000 I/O and processors utilizing special marshalling panels and adapter cables that connected to the existing terminal panels. Auto conversion of user applications was not necessary since the applications in use were simple and easily understood.

3. Dramatic Reduction in Process Downtime

None of the existing field wiring was disturbed and no new cabinets needed to be wired, achieving a dramatic reduction in process downtime. In fact, thanks to the compact design and high density of the CS 3000 cards, the number of cabinets required was reduced and valuable space was freed up for other uses.

Results

The actual replacement of Nisseki Chemical's legacy system took just one day and the entire project was completed with just five months of preparation. This project achieved the following results:

1. Faster commissioning

The elimination of field rewiring and the resulting rapid switchover from the legacy system to the CENTUM CS 3000 meant that Nisseki Chemical plant could minimize the opportunity cost incurred by having production lines shut down.

2. Productivity Improvement and Cost Effectiveness Achievement

The state of the art capabilities and high reliability of the CENTUM CS 3000 control system has reduced operating costs and improved uptime at the Nisseki Chemicals plant.

Customer's Satisfaction

Nisseki Chemicals has been very impressed at the speed and cost-effectiveness of the switchover from its legacy system to the CENTUM CS 3000 and is more than satisfied with the system's performance and functionality. They are pleased to have made the right choice in going with a Yokogawa migration solution.

System: CENTUM CS 3000