

VALUE PROPOSITION

AUTOMOTIVE

SOLUTIONS

Allen-Bradley® GuardLogix™

- Control system integrates standard and safety control

Rockwell Software®

RSLogix™ 5000 programming software

- Provides ease-of-use for programmers and helps manage safety memory

RESULTS

Start-up savings in excess of \$1 million

65 percent reduction in installation time

- International Automation was able to complete installation in five days rather than 14 due to the simplicity of the system

50 percent increase in production efficiency

- Production efficiency went from 40 to 90 percent

AUTOMOTIVE OEM SAVES CUSTOMER \$1 MILLION IN START-UP COSTS WITH NEW CONTROL SYSTEM FROM ROCKWELL AUTOMATION



Allen-Bradley® GuardLogix™ controller helps International Automation reduce installation time by 65 percent and increase efficiency by 50 percent.

BACKGROUND

In the intensely competitive automotive manufacturing industry, the ability to reduce costs and increase productivity while maintaining a safe work environment is vital to a company's survival. No one understands this better than International Automation.

Based in Windsor, Ontario, Canada, International Automation retrofits stamping machines for large tandem lines, most often for tier one suppliers to the automotive industry. A typical tandem line is 100 to 150 feet long and consists of five to seven stamping presses for metal forming. International Automation develops anywhere from four to six tandem lines each year – each requiring approximately eight weeks to produce – and exports them around the world.

CHALLENGE

Today, manufacturers and equipment suppliers continue to restructure their operations in an effort to remain competitive in the industry. To maintain its competitive edge, International Automation sought a new control system for its stamping machines that would not only ensure high quality and reduce start-up costs, but would also boost productivity while complying with increasingly stringent safety regulations.

International Automation also wanted to provide its customers with a flexible machine that could be easily integrated into their existing plants. With reduced downtime being a universal goal among manufacturers, producing a system that would have minimal effect on production was crucial.

Equally critical was the ability to meet all industry safety standards. At the same time, however, International Automation needed to make sure that the safety components it used in its upgrade also improved cost structure and gain productivity.

SOLUTION

After considering a number of options, International Automation chose to implement the Allen-Bradley® GuardLogix™ controller from Rockwell Automation in its machines. International Automation's first machine with GuardLogix was made for a tier one automotive stamping supplier.

"It was clear that Rockwell Automation offered the best control solution to meet all of our specific requirements," said Joe Quigg, corporate controls engineering manager, International Automation. "This was the only solution

flexible enough to do the job, and it integrated seamlessly into the existing line."

As part of the Rockwell Automation® Integrated Architecture, Logix Programmable Automation Controllers (PACs) provide a single control architecture for control systems. The GuardLogix safety controller combines the flexibility and high performance of the Logix platform with integrated safety control features to provide the high level of protection required for a safety control application, SIL 3 (Safety Integrity Level 3).

GuardLogix is programmed using Rockwell Software® RSLogix™ 5000 programming software, the same development tool used by all Allen-Bradley Logix PACs, providing a familiar and easy-to-use environment for programmers. RSLogix 5000 software also automatically manages safety memory so users don't have to manually manage the separation of standard and safety memory or worry about partitioning logic to isolate safety-related data.

RESULTS

With the fully implemented GuardLogix solution, International Automation saw immediate results that went well beyond its expectations.

Most drastic was the savings in start-up costs. For its first customer, International Automation saw in excess of \$1 million saved in start-up costs alone. That amount is comparable with the customer's average savings expectations after one year, but today International Automation is now able to deliver these savings in the start-up phase.

In addition, International Automation saw a major reduction in programming time. With programming typically taking anywhere from two to three weeks on a standard system, International Automation was able to write the program for the new safety control system in eight hours. The GuardLogix system uses certified blocks to emulate the input functionality of a safety relay rather than using a relay system.

"Programming a control system of this magnitude can be a complex, time-consuming endeavor," Quigg said. "However in this case, we actually thought we had missed something because it seemed too simple."

International Automation also saw a major reduction in its installation time. Due to the simplicity of the system compared to relay-based solutions, the impact on production was minimal. As a result, International Automation was able to complete the installation of the new system in five days rather than 14 — a 65 percent reduction. This helped minimize the impact on production, a key customer requirement.

Production efficiency was another area of major improvement. Prior to the use of GuardLogix, each of the five presses was 40 percent efficient and produced between 85 and 120 parts per hour. Now, with the use of GuardLogix, the tandem lines' efficiency is at 90 percent, each tandem producing an average of 500 parts each hour.

The results mentioned above are specific to International Automation's use of Rockwell Automation products in conjunction with other products. Specific results may vary for other customers.

Allen-Bradley, GuardLogix, Rockwell Automation, Rockwell Software and RSLogix are trademarks of Rockwell Automation Inc.

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846