



Millar Western

Designed for Success

Results

- Substantial increase in throughput
- Optimized machine performance
- Simplified troubleshooting and preventative maintenance
- Early detection of flaws and quality changes
- Easy to configure and use
- Seamless data integration with third-party applications
- Little or no impact on existing process
- Cost-effective solution

"We have realized a 10% increase in throughput with minimal alteration to our machine, resulting in an estimated \$15,000 per day ROI"

Rod Savoy
Millar Western Forest Products Ltd.

High-Speed Data Acquisition System Equipped with GE Fanuc Controls Yields Impressive ROI for Pulp Producer

Maintenance department personnel at Millar Western, the world's largest supplier of bleached chemi-thermo-mechanical pulp (BCTMP), wanted a reliable method of monitoring their hydraulic slab pulp press so that they could better maintain it. What they got from their investment in a high-speed data acquisition system designed and built by Binnington Development Corporation and controlled by GE Fanuc Automation was a 10-percent increase in throughput and an estimated payback of \$15,000 per day.

Pressing Ahead—Quickly

Alberta, Canada-based Millar Western uses a Sunds Defibrator slab press to compress heavy snowflake-like pulp into 1/2 cubic yard bales weighing about 500 pounds. On those occasions when the complex hydraulic machine measuring nearly 90 ft high and 20 ft wide had problems, operations personnel at Millar Western had a difficult time diagnosing them due to insufficient information regarding their root causes. In addition, say Rod Savoy, Electrician, and Pete Deboer, Millwright, at Millar Western, "We had ideas about how we could improve the performance of the press, but, in order to prevent too much stress on the hydraulics, we didn't dare test our theories until we had more details about the machine's performance."



imagination at work

In search of a solution, Savoy stopped by Binnington Development Corporation's booth at a Western Canadian Gescan/GE Fanuc User's Conference. A North Vancouver-based turnkey supplier of production equipment optimization and maintenance solutions and services, Binnington was exhibiting a VME interface for GE Fanuc's CIMPLICITY®* software and Series 90™-70 PLCs. Larry Soukoreff, System Integration Engineer with Binnington Development, started talking with Savoy—and the result was a custom-designed, high-speed data acquisition system for machine optimization and maintenance.

Typically, a human-machine interface (HMI) will poll and collect data from PLCs at one second intervals. The Binnington system provides a greater than 60-fold increase in performance. A VMEbus interface card installed in a GE Fanuc Series 90-70 PLC rack transfers the data received from hundreds of I/O points over a fiber-optic link to a standard desktop PC running GE Fanuc's CIMPLICITY HMI software. The data is logged to a SQL server database at 60 samples per second, providing an in-depth look at equipment operation. The high-speed system runs in parallel with the process controller, and has little to no effect on its existing operation.

"The difference between using traditional PLC data logging methods and our high-speed system for data acquisition is like the difference between using a still camera versus video to capture motion," Soukoreff says.

Soukoreff has been developing machine optimization and maintenance solutions using GE Fanuc's Windows®-based CIMPLICITY software for several years. "I am amazed every time GE Fanuc releases a new version of the product," he says. "The latest release, CIMPLICITY Plant Edition, is an unbelievably impressive product."

* Part of Proficy Intelligent Production Solutions from GE Fanuc.



As a systems integrator, Soukoreff appreciates the way that CIMPLICITY takes full advantage of the Windows NT® environment, providing good security, user-friendly graphics, and tight integration. As a 32-bit application, CIMPLICITY leverages the power of the computer's CPU, providing greater processing speed and efficiency.

"The CIMPLICITY software is really a top-notch product, and enabled us to build a high-performance solution for Millar Western. We like to think that, if CIMPLICITY is the window into the process, Binnington's solution is the magnifying glass."

Michael Rhodes, Manager of Business Development at Binnington Development, explains, "The key to our high-speed data acquisition system is that it doesn't just monitor hardware—it also allows process analysis." Because of this, Savoy, Deboer, and other personnel at Millar Western are able to extract information from the large amount of data the system provides, enabling them to see tiny process flaws that would otherwise be impossible to capture. Small though they might be, discovering and alleviating these flaws can provide dramatic increases in productivity and profitability.

Beating Past Performance to a Pulp

In fact, since implementing their high-speed data acquisition system, Millar Western has realized a 10-percent increase in throughput—an unexpected and profitable benefit of a system that was designed to monitor and diagnose machine performance. "Before we started using this high-speed data acquisition system, the press took 45 to 48 seconds to create a bale," Savoy says. "Now, it takes only 38 to 40 seconds. Since our plant runs around the clock, a 10-percent increase is absolutely huge for one of these machines." "Huge" may actually be an understatement in this case: Millar Western estimates it has gained \$15,000 per day in productivity since implementing the system. Another bonus: Binnington's system cost about a quarter of what some other companies were quoting for a machine monitoring solution.

While Millar Western has been installing Binnington high-speed data acquisition systems on other production equipment to reap even greater performance benefits, Binnington, too, is expanding the range of its GE Fanuc-controlled systems into a variety of discrete and process industries and applications. From assembly lines to pipelines, "high speed" and "higher profits" can become as seamlessly integrated as they are in Western Millar's pulp production process.

GE Fanuc Automation Information Centers

USA and the Americas:
1- 800-GE FANUC
or (434) 978-5100

Europe, Middle East and Africa:
(352) 727979-1

Asia Pacific:
86-21-3222-4555

Additional Resources

For more information, please visit the GE Fanuc web site at:

www.gefanuc.com

