

Catalyst Paper Generates Outstanding Savings and Improves Product Quality with Honeywell's Advanced Control Solution



“Investing in a state-of-the-art advanced control solution from Honeywell has permitted Catalyst Paper to gain increased control over our operating systems while saving millions of dollars each year in raw materials and energy. And we have been able to accomplish all this without sacrificing the high quality of the various products we produce.”

Dwight Anderson, Senior Process Control System Specialist, Catalyst Paper

Benefits

Catalyst Paper sought to find ways for its thermo-mechanical pulp (TMP) process to reduce dependence on kraft consumption and improve process efficiency at its Canadian Elk Falls facility. In order to maintain the company's high quality expectations, Catalyst wanted to find new, leading-edge ways to reduce kraft consumption, because of its expense, without sacrificing any of the mill's end-product standards.

To achieve cost savings without sacrificing product quality, Catalyst Paper called upon Honeywell to partner with them in developing an advanced control solution to improve their pulp quality.

Some of the benefits realized by Catalyst Paper after the implementation of Profit Controller include:

- Improved pulp quality by decreasing pulp freeness variability by 41% and pulp mean fiber length variability by 21%, enabling the kraft consumption to go from 30% of the furnish mixture to nearly zero, yielding an annual savings of \$3 million
- Two percent energy savings which translates to \$750,000 - \$1,000,000 per year
- Improved paper machine runnability
- Adoption of an open architecture platform promising tighter integration with other controller configurations and production systems
- Simplified controller configuration and tuning, resulting in more flexible expansion of additional controllers



The Elk Falls Division is located on the Pacific coast of British Columbia, Canada, near the city of Campbell River on Vancouver Island

Background

Catalyst Paper Corp., as it has been known since 2005, was formed from the amalgamation of several predecessor companies and acquisitions—including British Columbia Forest Products, Fletcher Challenge Canada, Norske Skog and Newstech Recycling—each with its own rich history.

With some 3,800 employees and 2005 sales of \$1.8 billion, Catalyst Paper ranks as the largest mechanical paper producer in western North America along with the most extensive paper recycling facility in western Canada. One of the world's few producers of sawdust-based pulps, a low-cost alternative to traditional pulp products, Catalyst's paper products are used in a wide variety of applications, including newspapers and inserts, telephone and specialty directories, retail flyers, catalogues, magazines and product packaging. Pulp-based goods produced by Catalyst include tissue, printing and writing papers as well as lightweight publications and specialty products. The diverse and growing operation results in an annual production of 2.4 million tons.

Challenges

The continued reliance on the expensive resource of kraft had caused Catalyst Paper to start investigating ways the company could gain improved control over its processes while also tightening the reins on its multi-million dollar budget for raw materials.

"In this highly competitive marketplace, it was essential for the future well-being of our operation that we find ways to optimize the efficiency of our various production processes," said Dwight Anderson, Senior Process Control System Specialist, Catalyst Paper.

Catalyst Paper desired a comprehensive suite of well-integrated, user-friendly applications that would deliver immediate and noticeable improvements across every aspect of its mill operations.

"As we used thermo-mechanical pulp to produce a wide range of paper products, it was critical that we find a way to reduce the pulp variation which was affecting the quality of the finished paper," continued Anderson. "We were looking for an advanced control solution that would allow us to increase our quality enough to reduce the use of expensive kraft pulp while maintaining the quality of our finished product."

More Information

For more information on Honeywell's Profit Controller or any of Honeywell's automation Products, Services, or Solutions, visit our website www.honeywell.com/ps, or contact your Honeywell account manager.

Automation & Control Solutions

Process Solutions

Honeywell

2500 W. Union Hills Dr.

Phoenix, AZ 85027

Tel: +1-602-313-6665 or 877-466-3993

Solution

The strong process interactions in the TMP process were a perfect fit for Honeywell's industry proven Profit Controller application. This state-of-the-art multivariable control and optimization offering was specifically developed for the most complex and interactive industrial processes. Honeywell set about assembling its team of industry experts and began planning an interactive implementation with key members of Catalyst Paper's staff. The subsequent installation went smoothly and according to budget and time parameters.

With Honeywell's advanced control solution in place, Catalyst Paper was able to begin stabilizing its refining processes while reducing variation in its products sufficiently to eliminate kraft usage while still maintaining its quality specifications.

"We are thrilled with the results we gained from Profit Controller," added Anderson. "At the Elk Falls facility, we immediately saw that stabilization controls reduced our motor load by 53 percent and consistency variations by 86 percent."

"Thanks to Profit Controller which was a major part of the multi-faceted project, we have improved the quality of our pulp, which reduced kraft furnish to our newsprint machine—saving us \$3 million a year," concluded Anderson. "These kinds of extraordinary savings would not have been possible without Honeywell's team of implementation experts and leading-edge technology."

As a result of the reduced motor loading, Catalyst Paper also enjoyed the side benefit of decreasing energy usage by between \$500,000 and \$1,000,000 annually.

Based on Honeywell's Robust Multivariable Predictive Control Technology (RMPCT), Profit Controller delivers all the functionality needed to develop, deploy and operate today's most complex multiple-input/multiple-output (MIMO) applications to deliver elite levels of cost-efficient operation.