

Canfor Improves Control, Lowers Operating Costs on Lime Kiln with DeltaV™ System Advanced Control

RESULTS

- Up to 90% reduced variability
- 6% to 15% reduced energy use
- Less than one year project payout



APPLICATION

Lime kiln

CUSTOMER

Canadian Forest Products Ltd. Prince George, British Columbia

CHALLENGE

Kiln operations like those at Canfor are subject to interaction among control loops, which can be the cause of less than optimal operating conditions.

SOLUTION

Canadian Forest Products Ltd. implemented DeltaV Predict advanced control, part of the DeltaV™ digital process automation from Emerson at its Northwood pulp mill in Prince George, British Columbia. The upgraded controls were installed to improve control and lower operating costs by reducing fuel consumption and variability on one of two lime kiln process units.

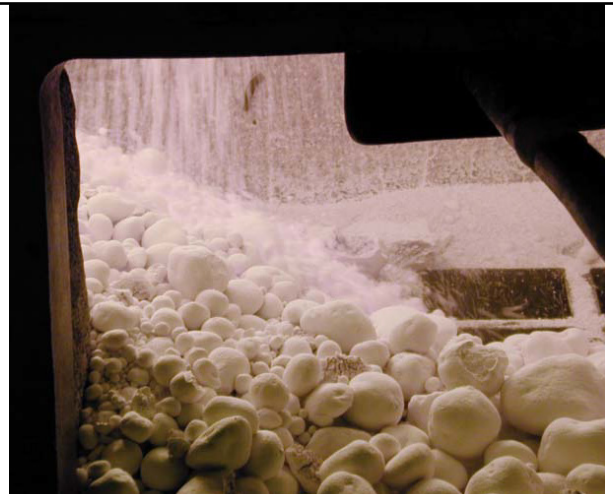
“Since the installation of DeltaV Predict, our process variability on the lime kiln has been reduced by as much as 90% on key process parameters.”

Dave Sordi
Process Control Engineer
Canadian Forest Products. Ltd. (Canfor)

“Since the installation of DeltaV Predict our process variability on the lime kiln has been reduced by as much as 90% on key process parameters,” said Dave Sordi, process control engineer at Canfor, “We’ve been running the model predictive control application on our kiln full time since the control was commissioned. We are seeing smoother operations even while burning multiple fuels.

Initial results show decreases in specific energy usage on the order of 6% to 15% resulting in project payout of significantly less than one year.” Canfor was able to take advantage of DeltaV Predict’s ability to automatically identify the process model, minimizing process testing and commissioning costs typical for this type of project. Model predictive control products like DeltaV Predict are designed to easily address those process interactions and compensate for them.

“We designed DeltaV Predict from the outset to be easy to use and implement,” said Darrin Kuchle, product manager for DeltaV advanced control products, “The main reason advanced control applications are not used more often is the large investment of time and money normally required to commission and maintain them. DeltaV Predict addresses those concerns directly.” DeltaV Predict is available for control problems with as few as one manipulated variable and can handle processes with up to 8 inputs and 8 outputs. Since the MPC algorithms executes directly in the process controller, it can execute as fast as once per second allowing it to be used where other MPC applications can’t. Additionally, since the DeltaV process controllers can be deployed in a fully redundant manner, the MPC can be redundant as well, greatly improving availability. As part of the PlantWeb™ architecture, the DeltaV digital automation system makes advanced control easy.



“We are seeing smoother operations even while burning multiple fuels. Initial results show decreases in specific energy usage on the order of 6 to 15% resulting in project pay out of significantly less than one year.”

Dave Sordi
Process Control Engineer
Canadian Forest Products. Ltd. (Canfor)

Emerson

North America, Latin America:

☎ +1 800 833 8314 or

☎ +1 512 832 3774

Asia Pacific:

☎ +65 6777 8211

Europe, Middle East:

☎ +41 41 768 6111

🌐 www.emerson.com/deltav

©2020, Emerson. All rights reserved.

The Emerson logo is a trademark and service mark of Emerson Electric Co. The DeltaV logo is a mark of one of the Emerson family of companies. All other marks are the property of their respective owners.

The contents of this publication are presented for informational purposes only, and while diligent efforts were made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.