



"We now have stable pressure and the system is operating at maximum efficiency," says Tim Saunders, capital and automation manager with Conifex, of the hydraulic systems upgrade. "The oil in the system runs cooler and there's a big energy benefit."

Improved hydraulics cut energy costs at Conifex Mackenzie



The Conifex Timber sawmill in Mackenzie, B.C. is seeing improved performance following a recent hydraulic systems upgrade, with a bonus that the system now uses 65 per cent less energy.

By Jim Stirling

Sawmills today are required to perform rapid and repetitive functions with precision. The quest to improve overall performance is perpetual.

If components don't perform precisely, consistently and smoothly as they should, a machine's optimum performance will be compromised. The implications of that can be evident up and downstream of the machine itself.

Conifex Timber's sawmill in Mackenzie, British Columbia was experiencing just such an operational issue at the quad canter on the mill's large log line, outlines Tim Saunders, Conifex's capital and automation manager. The sawline was subject to inconsistent hydraulic flow delivery and that was contributing to downtime, he summarized.

The solution required refining electro hydraulic technology to solve a mechanical problem: a deeply technical issue.

Bosch Rexroth Canada and its system integrator partner AMS Solutions were called in to resolve the situation. A diagnostic investigation was the initial step. From that, a course of remedial action was determined and a team dispatched to Mackenzie to implement it.

Rodney Trail, Industry Sector Manager with Bosch Rexroth Canada Corp., in

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"The infeed system performed better than expected, out of position faults were all but eliminated and overall the system was a success, with the line running steady."

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Fredericton, New Brunswick, was part of the team and he takes up the story.

"The sawline issues were being caused by out of position faults, velocity errors and oscillations in the axis," he says.

"We took an advanced diagnostic approach to the situation to solve the problems and deliver a performance guaranteed solution," recalls Trail. "We used a variant of Sytronix known as SVP 7010." Trail, a Sytronix specialist, says the term means the intelligent interplay of electronic drives and smart hydraulic pumps.

He says the SVP 7010 variant is a closed loop system with the ability to maintain a desired pressure within the system in close to real time for better axis tuning.

"Not only are the adjustments made extremely fast but now the pump motor group has the capability to network with other devices in the mill. This enables us to set the reaction of the pump motor group based on system requirements," explains Trail.

"For example, if the sawline requires a large group move for a particular saw pattern, the hydraulic power unit is made aware of the requirement before it happens." Before it happens. A little bit of magic in Mackenzie.

"We now have stable pressure and the system is operating at maximum efficiency," declares Conifex's Tim Saunders.

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“The oil in the system runs cooler and there’s a big energy benefit: we’re using about 65 per cent less energy. They (the Bosch Rexroth team) fixed an operational problem plus they delivered a range of benefits.” Saunders also delivered praise to AMS Solutions, the Enderby B.C.-based industrial automation specialists. “In my opinion, they are the best control people in the industry.”

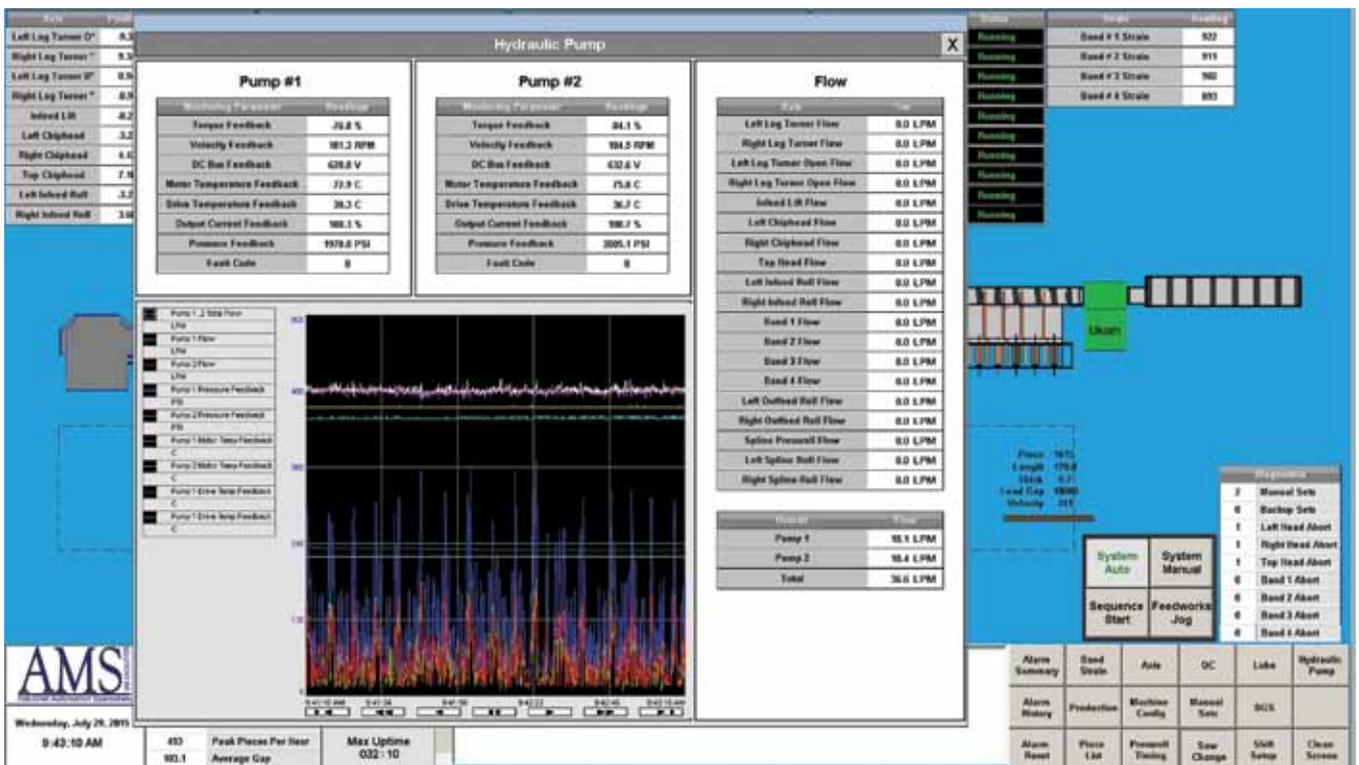
Bosch Rexroth’s Rodney Trail was also pleased with the results. “The infeed system performed better than expected, out of position faults were all but eliminated and overall the system was a success with the line running steady and any changes noted in operation were all positives.”

Trail notes that pressure control under the new system now drops only a few PSI (not hundreds) and the system temperature is greatly reduced because of the increased efficiency.

Confifex Mackenzie reaped a further benefit from building future technology into a dated hydraulic unit. “Our maintenance guys were part of the crew working with Bosch Rexroth and AMS,” explains Saunders. “As a result they gained a much better understanding of the new system installed.” The system has not missed a



beat since the installation during Easter 2015. “It has been pretty much a hands-free issue,” says Saunders. “It just runs.”



AMS Solutions, the Enderby B.C.- based industrial automation specialists that worked on the project with Bosch Rexroth Canada, received praise for their involvement with the Confifex Mackenzie project. "In my opinion, they are the best control people in the industry," said Tim Saunders, of Confifex.