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F E A T U R E S

HARDWOOD FOCUS

Lauzon Mixes it Up

The flooring experts at Quebec's Lauzon International Inc. have opened a new hardwood sawmill that combines the best of softwood and hardwood milling technology.

10

Profitable Diversions

Cherry Forest Products has invested in market diversification and customer-driven solutions to avoid the fate of so many conventional hardwood mills in this market.

16



Page 10

Accumulated Risk

When it comes to hydraulic accumulators, what you don't know can kill you. Here are a few safety tips to avoid tragedy.

21

Double Vision

What you can't see can hurt you if you're a BC mill dealing with beetle cracks or an eastern mill with balsam fir and rotten boards. Mills are reacting with combined geometric and vision scanning.

24

Yukon Timber Rush

Arctic Inland Resources is serving the local Yukon market with a mix of new and slightly used gear.

26



Page 16



Page 24

Departments

Sawn & Quartered – Fearless Market Predictions.....	6
Supplier News – Microtec Arrives.....	9
Mail Bag.....	28
Cutting Edge Gear.....	29
Events & Education.....	Visit www.canadianwoodproducts.ca

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This Month's Cover:

The planer on Cherry Forest Products' new custom ripping/planing line in Guelph, ON. Story on page 16. Photo: Scott Jamieson/CWP.

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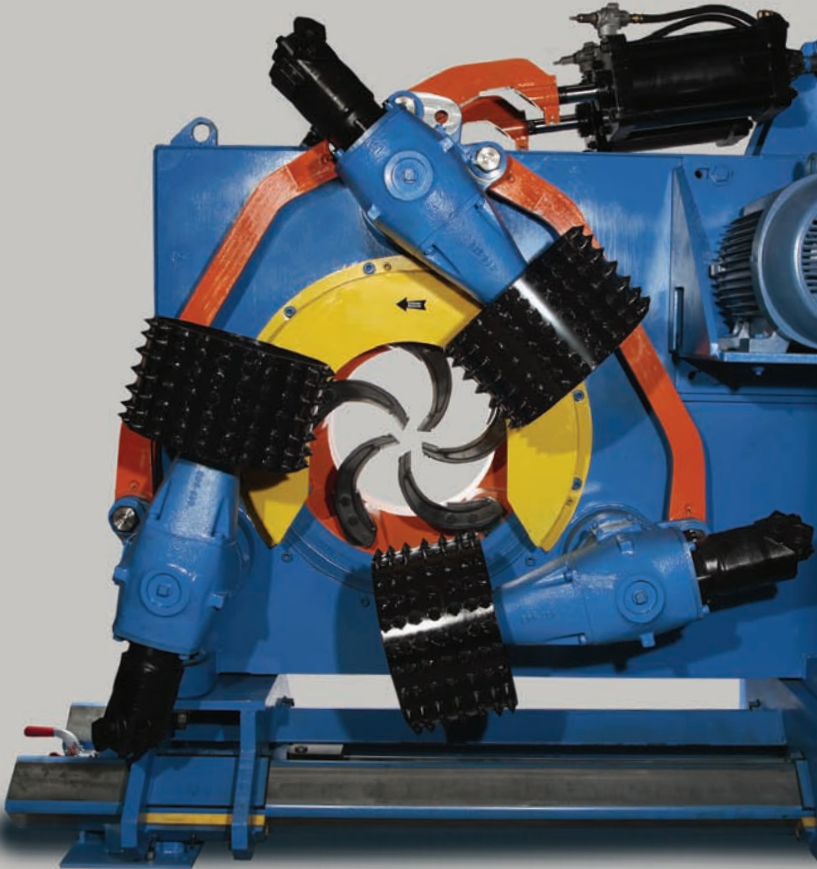
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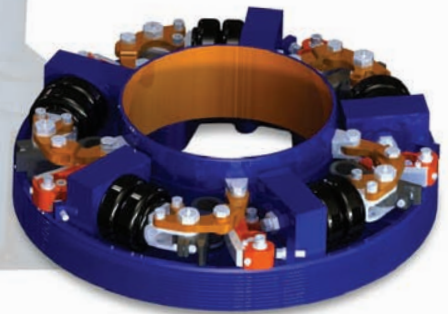
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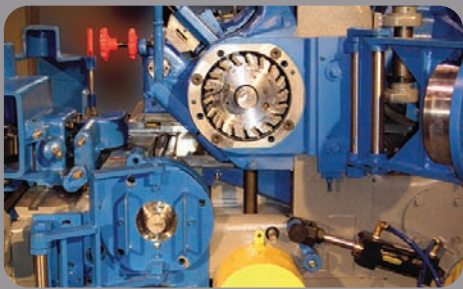


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Brighter Times Ahead

It's not what you want to hear, but get through another 10 to 12 months, and the future is ours. This, and other fearless predictions from CWP.



October is budget month around here, when I get hauled to the head shed in Ontario's tobacco country (and you think our industry has problems) to talk next year's numbers. No doubt the first question (again) will be "Do you expect the forestry market to turn this year?"

Last year's answer was simple – "Sure it will turn – further south." I take small comfort in being right. Now, 12 months later, what to tell the boss? Is 2009 the year we will see the worst market contraction since WWII start improving? For more than a few reasons, I'll be saying yes. Here are just a few fearless predictions from the editorial offices of *Canadian Wood Products*.

- Both new home sales and pricing are expected to finally bottom in the US as we reach the end of 2008 and into 2009. All that will be needed to re-start the housing sector at that point is a push. Enter the \$7,500 credit for first-time buyers that must be used by July 1, 2009. We will all be surprised at how popular this credit will be, and at the rush to use it before the deadline. Think from a young buyer's perspective. If you're looking at a \$220,000 house next May, do you hold out another few months hoping for an additional 5% drop in home values to perhaps save \$11,000, or do you go for the sure \$7,500? Most will go for the bird in the hand, not 1.5 in the bush.

- Once things get moving again in sales, the recovery in housing starts may also be faster than many predict. I know we have over 10 months of housing inventory on the shelf right now. But that's 10 months at a snail's sales pace of less than 900,000 total units per year. If we see a little rush next spring at a more normal pace of 1.5 million units, that inventory will draw down soon enough. Once that starts, look out.

Home builders have of course been laying people off in droves over the past three years. You can bet it has been

killing them, since they had fought tooth and nail to get them in the first place, and were always short skilled builders. When building picks up, few of these workers will be at home waiting for their old jobs back. There will be a capacity lag in the home building sector for years as the market picks up, creating a supply side shortage few are predicting. If builders can keep up, it will be by using pre-fab and engineered building solutions. Hopefully with Made in Canada stamped on the side.

- There will also be capacity issues on our side of the equation. There are a lot of mills down right now, many permanently. Yet even the temporary or indefinite closures will not launch back into production in a hurry. Not all of them. Leaving regional fibre restrictions aside, Canada's

Finnish First

Canadian Wood Products magazine, and editor Scott Jamieson, were awarded a Gold Award at the Kenneth R. Wilson Memorial Award ceremony held in Toronto earlier this summer. The first place national award was given by the Canadian Business Press Association for Best Manufacturing Article on our coverage of the Finnish sawmilling industry, and what it may mean for Canadian sawmillers during a week long Finnish Wood Safari. *A Solid Finnish* was published in our June/July 2007 issue, and is available in the archives section of www.canadianwoodproducts.ca.

CWP would like to thank our hosts at HewSaw/Veisto Group, as well as the many North American sawmillers on our tour for bouncing around ideas and sharing comments. That conversation was a large part of our success.

Babbitt guide pads are finished.



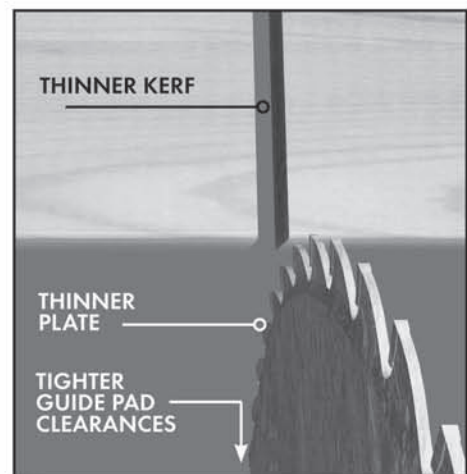
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economy does not have an excess of labour right now, and certainly not in some key regions that would otherwise be able to put out a lot of lumber or panels in a hurry, like BC, Alberta, northern Ontario, and Quebec. And who's going to log it all? The wood products supply side will not be as elastic as many assume, keeping supply limited and pricing solid through the recovery. Mills will automate, invest, and slowly re-start, but always behind

the demand curve. It will be hard to choke this recovery with supply.

- Bioenergy and biomass will continue to grow in importance through 2009. It will not be the be-all and end-all of the forest products economy some hope, at least not for a few more years. It will help more than a few mills, loggers, and equipment suppliers balance the books next year, and it will keep fibre supplies tight in many areas. It's yet another factor in making

wood products more valuable. We believe this strongly enough to launch an entire magazine for the segment – *Canadian Biomass*. How's that for a fearless prediction?

- Both energy costs and currency pressures will continue to ease for Canadian sawmillers. We have all heard the heavy impact these had on our operations as they climbed to \$145/barrel and \$1.10 a loonie respectively. The opposite is also true. A dollar under 90 cents and oil under \$95 will be the norm for 2009. It's possible we may finally see a quarterly report that does not blame either in 2009. Only possible.

- The mid-term market upswing many are now predicting – with global fibre shortages and US housing starts approaching a whopping two million units by 2012 – will become accepted wisdom by the end of 2009 as we start to see things come around. This will lead to renewed optimism, planning and investing by mills to be in a position to best serve this new market, more attention paid to the human resources side of the equation (soon to be our Achilles heel), and increased automation when we realize we're too late for a recruiting drive.

- And now my most fearless prediction of all. Once this all starts, and certainly by mid 2010, all talk of diversifying markets or product mixes, and the need to merge efficient commodity production with customer-oriented flexibility will go out the window. All eyes, capital budgets, and available trucks and trains, will be pointed south at a market that needs every stick of wood it can get its hands on. It'll be déjà vu all over again.

In case the boss is still reading, back to 2009. It'll be a soft start, slow middle, and a stronger finish than most think. The credit fiasco remains a huge downside risk. It may well postpone, but not prevent all of the above. In the meantime, a writer's gotta eat.



Scott Jamieson, Editor
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What do you do if your bid to buy a failing but respected sawmill machinery supplier falls just shy of winning? You start a sawmill machinery company of your own. At least that's what two of the groups vying to buy the now defunct Coe Newnes/McGehee (CNM) this past summer did. A group of long-time CNM key employees have come together with Austrian sawmill gear giant Springer Maschinenfabrik and Italian sawmill optimization and controls giant Microtec to form a totally new venture, Microtec Industries North America.

"I guess even though our bid for CNM didn't succeed, we had been bitten by the entrepreneurial spirit," says Tim Gallant, who is sales & marketing manager with the new venture, and spoke to us in mid August between dry-wall work on the new offices and heading down to the IWF 2008 show in Atlanta to introduce the new company. "We've just hung the sign over the door, and have office space and board room ready as part of our 25,000 ft² facility, but we'll be moving fast from here."

Based in Salmon Arm, BC, Newnes' home turf, the company is 78% owned by Microtec (itself 75% owned by Springer). The remaining 22% is owned by some of the current 15 employees, 13 of which are based in Salmon Arm, and two in Europe.

"We've got a very broad range of talent and experience," Gallant explains. "We have a good group from controls, a mechanical installer, several from optimization, myself in sales, some chop saw expertise, administration, etc..."

Full Line to Come

In time, Gallant says Microtec Industries NA will have the full line of gear from both Springer and Microtec, a line that runs the full gamut from lumber handling and processing to controls, optimization, and some of the leading edge technologies coming out of Europe, like CT scanning. The idea is to take this cutting edge gear, and use the local expertise to make sure it is suited to North American needs and realities. For starters, the company has a few products in mind to launch their name and get the business flowing.



The Microtec Industries NA's team out of beautiful Salmon Arm, BC, includes veterans from all sides of the sawmilling business – Controls, mechanical, installations, optimization, reman, and more.

"The company has a very advanced optimized chop saw system – Golden Eye – that will go head-to-head with any out there, and is among the most ready of the product line for North American conditions. Another product for the near term is the linear planer optimizer, and we have people on board with a lot of experience in this application."

In fact, Chris Wells, who headed up the LHG program at CNM is a team member with Microtec Industries NA. The first Golden Eye based linear planer optimizer will be available in Q1 2009, Gallant adds.

Beyond that, Gallant says they will be making a quick move into the controls side of the business as well.

"Long term, the plan is to have the full range – and this is a massive company and product line. We also see having full training facilities here in Salmon Arm as well. But for the outset, we need to be careful, and we want to service everything we sell out of North America. So we will focus on these core products, and grow from there."

These core products include:

- Viscan MSR strength grader.
- Viscan Plus MSR strength grading device with x-ray supplement.
- Golden Eye linear lumber scanner for the reman market (chop saw optimization).
- M3Scan moisture meter

- Optiside growth ring scanner and turner.
- Log Eye log scaling.
- Variosort lumber tally.
- Lumber handling controls and systems (new and upgrades).
- Glulam beam processing systems.
- Mechanical and controls servicing of solid wood processing machinery.
- Complete mechanical lumber handling systems.
- Linear planer lumber grader for dimension lumber (available Q1 2009).

Plans are also in the works to have testing facilities on site this fall where North American sawmillers can send their own lumber to test the Golden Eye linear lumber scanner for both reman and planer optimizer, as Gallant explains. "This is like the Coke-Pepsi Challenge - We are willing to go head-to-head with anyone with these products. These will be North-Americanized versions, so mills can send their lumber for testing, and then compare it with other systems. That's the plan."

But for now, Gallant has a plane to catch, and a company to help launch. In an industry that was starting to lose a little too much choice for larger sawmill projects, this is exactly what the doctor ordered.

– Scott Jamieson

Lauzon Mixes IT UP!

The flooring experts at Quebec's Lauzon International Inc. have opened a new hardwood sawmill that combines the best of softwood and hardwood milling technology.

by **Scott Jamieson**

Any sawmiller would agree that hardwood and softwood mills are different species. The first are meticulous and value-driven, yet somewhat slow and labour-intensive for today's markets and varied log quality. The latter are blindingly fast and automated, but at times also a little careless with grade, value, and market diversity.

Still, to Michel Houle, vice president of products and technology at Lauzon International Inc. (LII), there is a juncture where the two can meet. It's in a forestry town called Thurso. There, on the banks of the historic Ottawa River just a few kilometres from Montebello, the flooring specialists at LII have built what they call a "hybrid sawmill", a cutting-edge hardwood mill that opened in December 2007.

"It combines technology from the softwood sector with technology and attitudes from the hardwood sector," Houle explains. "From the softwood side, we're getting the high-speed commodity production and automation. The hardwood side brings the high-quality and value focus, but at a lower speed."

By marrying the two seemingly contradictory concepts, LII hopes it will help solve the dual challenges facing Canadian hardwood producers – Supply and demand. On the supply side is a mixed wood and hardwood forest base that no longer supplies just big, sound hard maple and yellow birch. Quebec's silviculture system has over the past decade or more focused on long-term stand improvement, so that the logs coming off LII's CAAF (Quebec's Crown land management and timber supply agreement) are of mixed quality. That's a polite way of saying there's a lot of pulp wood mixed in with the sawlogs.

On the demand side is a North American furniture industry collapsing under foreign competition and a US housing sector collapsing under domestic greed. It's a market that can no longer pay enough for the premium hardwood cuts to subsidize the low end markets.



ScanMeg scanners after the USNR band resaw check lumber size in real time using USNR's Point Check size control system. Other scanners decide whether the square will yield another sideboard, or can be sent right to the Cardinal bull edger for flooring material.



Michel Houle, vice president products and technology, at the 97-bin Piche Industries sorter, where the flow from both grade lumber and flooring lines finally merge. "We need to be able to extract the grade lumber from good sawlogs, but still make lumber from the rest of the tree. That's the goal with the hybrid concept."

"With the forests and harvesting rules today, we have to be able to take a higher percentage of the tree and turn it into lumber," says Houle in explaining the challenge facing Quebec's hardwood sector. "With a traditional sawmill, it's impossible. Without a nice big log, you won't get the selling price you need to cover the costs. That's why almost all the hardwood mills in Quebec are closed right now. The cost of the wood, the lower grade, the fees we pay, the higher cost of getting the wood to the mill, and the lower log quality, which means we are not able to get enough Select and 1 Common lumber grade from the logs. The average selling price is not high enough to cover the cost of the logs and the transformation costs in a traditional mill. It just doesn't work."

He should know, as three of the company's four hardwood sawmills are currently shut. Other Quebec hardwood suppliers share a similar fate, or worse. And that's where LII's only open mill – the Thurso hybrid mill – comes in.

Idea for the Time

The goal behind the hybrid concept is to be able to use more of the tree tops to make lumber, but to do so in a way that does not add more cost than the material is worth. And that's all about small-log sawmilling, à la softwood. It's an idea that's been a long time coming, as Houle explains.

"We got our first sawmill when we bought our flooring plant in Maniwaki (north of Gatineau) in 1997. It had a sawmill, so we got our first taste. Two years later, we bought another sawmill about 15 km from the first. It had a small-log line, but not an efficient one by today's standards. We tried to run it for six months. It didn't work, but it certainly got us all thinking about the opportunities – what if we could transform the pulp logs efficiently for flooring stock, which we can then use in house at exactly the dimensions and quality level we need?"

When the chance to buy the original Thurso sawmill from Turpin Forest Products arose in 2003, LII felt the time



After snap scanning by Dynavision scanners, logs are rotated according to ProLogic+ optimization and sent to the Sawquip center quad. The line is designed for high-speed recovery of flooring material from lower quality sawlogs. That leaves the carriage to focus on larger grade logs.

and place was right to put theory into practice. After some tough negotiating with the Quebec MNR allowed them to consolidate a CAAF (AAC) of 200,000 m³ of hard maple, yellow birch, and some beech in the one facility, and a fire all but destroyed the old mill, the company began

rebuilding. The resulting equipment is among the best in its field. But it is more how it has been combined, the product flow, and the variety of products that are truly unique.

“I don’t think there is another sawmill with the exact concept all put together,” Houle agrees, “but each of

the machine centres was proven technology before we used it. We were able to see them running somewhere else to make sure they’d work and do what we wanted. We had to make a few modifications to combine the hardwood and softwood mentality, and then we combined all those concepts into the hybrid mill.”

The key to the hybrid concept is flow – keeping the higher quality grade logs and lumber separate from the high-production flooring and pallet wood. It all starts with the log infeed. Log loaders feed two sides of the deck, starting off with a rough sort to help balance the flow between the mill’s two primary breakdown

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Sideboards are scanned in a transverse ProLogic system+, and then sent through a high-speed Lico board edger with cutting patterns set according to thickness. The hardwood machinery supplier also designed a special alternating outfeed that allows the different products to go to either flooring or lumber green chain.

centres. After debarking, this sort is refined by a ProLogic+ log sorter, which splits the flow in two: Logs that will yield grade lumber go to one side; logs destined for flooring or pallet stock go to the other. Most of the deck has been salvaged from the old mill, except for the scanner and resulting Piche Industries log kicker and dual conveyors for the log sort.

Most hardwood sawmills will be at home on the grade lumber sawing side, where a Piche Industries log kicker feeds a spanking new USNR slant carriage with 3D LASAR full-profile scanning and MillExpert optimization and Jacobsen Engineering



drive system. Cutting for best opening face is done via a USNR double-cut bandsaw headrig offset 15 degrees to match the inclined carriage. "We're working with gravity, not against it in positioning the log," Houle says of the slant carriage. This is the only area of the mill where Quebec opti-

mization specialists ProLogic+ did not supply the optimization. "We went with the complete package from USNR on the carriage."

USNR also supplied the optimized band re-saw. Centre cuts are sent here, where an operator uses cant turners and scanners and





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ProLogic+ optimization to cycle them around a merry-go-round system until a pre-set cant size has been reached to make flooring products.

In contrast, it's the softwood crowd that would feel more at home on the small-log or flooring line. It is a Sawquip canter quad line that has been tweaked to handle a steady hardwood diet. First off in the changes is the full-profile scanning system up front. Instead of the "on-the-fly" high-speed scanners seen on

canter lines, logs are charged into a scanning zone more like a lathe or end-dogger. Once the log is positioned, ProLogic+ takes a snap scan image with LMI DynaVision L4 scanners, providing a density of a scan every foot. The log is then advanced another foot, scanning all the way, thus dramatically enhancing the scan density. The resulting optimum log rotation is then chosen, the log is rotated using underlying chains, and is then fed to the Sawquip canter with

positioning and cutting based on the mill's order files. Since the majority of material off this line will be used in house by Lauzon flooring plants, the emphasis is on sawing to meet very specific needs, not inventory.

"I'm not going to give away all our recipes," Houle says with a smile, "but we are making special products and dimensions here at the sawmill that help eliminate steps and costs at the flooring plants. There's no point in making products they don't need. We just make exactly what the customers at the flooring plants need."

The Sawquip line itself is a canter with double-arbour circular saws, and a dual outfeed, with sideboards and cants going to different machine centres. Sideboards from here join those from the USNR carriage at a Lico Industries high-speed board edger. The hardwood specialists at Lico also designed a special outfeed for the edger to facilitate the hybrid concept. Boards are read by the Prologic+ edger optimizer, and depending on thickness, optimized solutions are chosen.

"The optimizer reads the thickness, and then uses different parameters for optimization depending on whether it is flooring or lumber material. Once sawn, the outfeed will shift to send the material to the appropriate green chain."

Cants from the Sawquip line and the USNR re-saw converge on a Cardinal bull edger. This hardwood warrior is one of two remaining centres that survived from the old mill. The other is the grading station for the lumber side of the mill.

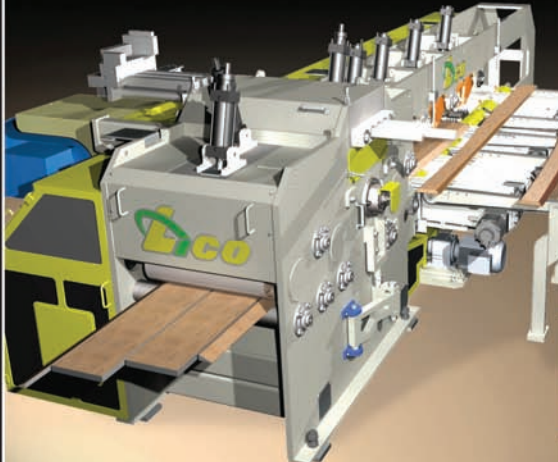
Dual Grading

All lumber is dumped onto two distinct green chains – one for flooring material, the other for grade lumber. Here again, two concepts play out in tandem.

"For the lumber grading, we're using a traditional hardwood approach, with speeds of 25 boards a minute. For the flooring side, we can afford to go fast – It's either flooring or it's pallet, that's it. We're not counting units like you would for NHLA rules. It's just a quick visual scan, and on we go."


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The Piche Industries stacker was modified to allow special stacking for flooring products.

The new flooring grading line is from Piche Industries, and is designed for high-speed sorting. The mill is looking at automated grading down the line, and is starting to like what they see on the hardwood side, but did not feel the technology was ready when the mill was being built. For now the mill is satisfied with dimension scanning to aid the graders and for tallies.


After the two grading lines, all lumber merges to a Cypress grade mark reader and then a single 97-bin Piche Industries lumber sorter and stacker. Adjustments were made to the latter to allow special stacking for flooring. The mill runs its own kilns from Cathild, and is lucky enough to be tied into the neighbouring Fraser Papers pulp mill for heat and steam.



In exchange, residues are conveyed directly to the pulp mill.

Houle came over to the sawmill from the world-class Papineauville flooring plant in May to help with the ramping-up process. He admits they are just over half way to where he wants to be. Still, he can see the potential of the concept in action. When it comes to lumber recovery,

he's already convinced, thanks to the high level of optimization, and the combination of lumber, flooring and pallet products, and thus the resulting wide range of widths, thicknesses and lengths.

"It's between 70 and 80%, depending on species, which is world's away from where we were. Now, that's where we need to be." 

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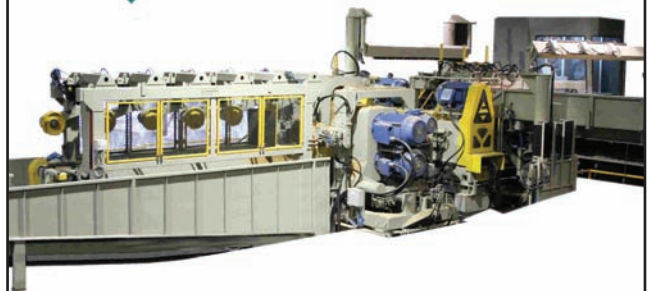
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The TS Manufacturing grading stations are placed to give operators a great view of each piece. The flow is split between two grading lines, each with surge deck.

Profitable Diversions

Cherry Forest Products has invested in market diversification and customer-driven solutions to avoid the fate of so many conventional hardwood mills in this market.

by **Scott Jamieson**



he same thinking that caused a problem won't help find a solution. This simple truth from none other than Einstein makes a good motto for the hardwood lumber sector right now, as mills set up only to saw quality lumber from quality logs to serve quality-driven markets struggle to stay afloat. More of the same is not the answer.

For some different thinking, and a little market diversity, you needn't stray farther than an hour from Toronto's Pearson International Airport. Once you fight your way out of the city's west end traffic, head to Guelph. There you'll find Cherry Forest Products, a dynamic private company that in the midst of a stagnant industry is doing quite a bit to brighten its own future.

CFP is owned and operated by three brothers – Robert, John and Jacob Baranski. It started off in the 1950s as a sawmill & pallet operation run by father Edward Baranski in Fergus, a farming community 30 minutes north of Guelph. CFP expanded into a larger sawmill in 1986 when it moved to a 10-acre site in the Kerr Industrial Park just off Hwy 401. The site now spans 20 acres, and the brothers each look after part of what is a markedly more complex and diverse business.



This Viking Turbo 505 pallet assembly line puts out 10 loads of pallets daily with minimal labour and risk. The company got its start in pallets, and today runs a separate division to supply Ontario's manufacturing heartland.

CWP toured the facility with Jacob, who's responsible for export sales and cut-to-size lumber for furniture, home finishing and cabinet clients. Other businesses include a joint venture in hardwood veneer for domestic and overseas markets, hardwood lumber drying and heat-treating, custom ripping and planing, residuals, and of course hardwood and softwood pallets and packaging.

Custom Slicing: The key to Cherry Forest Veneers Division is the years of experience possessed by partner Joe Abele. While the company does not do its own slicing, it sources out to experienced mills, and key people are responsible for supervising the custom slicing of the veneers. This common-sense approach is common throughout CFP operations, but it's not exactly a hands-off operation either. The company sources the logs, arranges transport, stores product in a climate controlled warehouse on site, and hosts customers that fly in from as far as Europe and China to look at fitches.

Flexible Milling: Even in one of its core businesses – hardwood milling – CFP is not obsessed with controlling every step of the process, preferring to focus on final product quality and the bottom line. The company still runs that original 1986 mill, a Morbark circular headrig with set-works. The process is tailored to the downstream operation, with the sawyer looking for grade lumber outside and passing the cants on to the pallet operation for efficient conversion to pallet stock. It puts out eight to nine million bdf t a year, and is about the only spot in the mill that has not seen investment over the past five years.



Jacob Baranski with lumber outside the new line. "We were seeing a lot more interest in fixed width but random length lumber, and this line gives us more flexibility to pursue that."

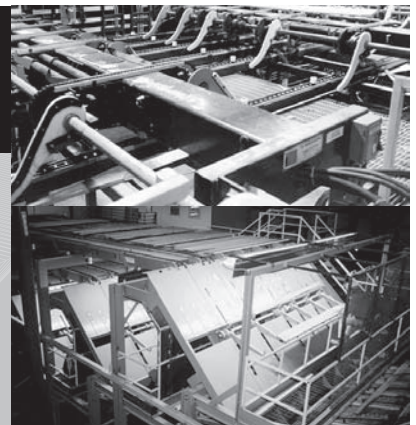
Still, this is just the tip of the iceberg when it comes to CFP's lumber business. It also farms a large volume of sawing out to local custom millers, another relationship that uses both parties' strengths Jacob says.

"These smaller mills are very good at sawing for grade lumber, and are very happy to do that on a per bdf t basis. We source the logs, handle all the transport, do the drying,

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finishing, marketing and handle inventory – the sides of the business they'd rather not get into. Every time we look at modernising and automating the sawmill, it means expanding it, and we reach the same conclusion. We'd just be creating a monster that would have to be fed, creating local log shortages, and losing control. This way we have sawn what we need, and do the rest of the value-added steps here ourselves."

Beyond that, the mill also buys a substantial volume of green lumber on the market. All in all, it results in an annual volume of 30 million bdf. "We can saw in house, we can have our logs sawn elsewhere, or we can just buy certain species as we need them, or when the market says it makes more sense than buying them ourselves. We're always balancing the three."

A good example today is red oak. With many mills producing an abundance of it, it makes more sense to simply buy it from a major producer than saw it in house. "We can't make it for the price some suppliers are selling it for, and our quality system insures that any lumber bought outside is rigorously controlled."

Drying & Steaming: Some 16 million bdf of the 30 million bdf is dried on site in nine kilns. The company moved into drying in the mid 90s when it began selling cherry into Europe. Naturally, as newcomers selling into Europe, they did what many of their clients would do, and started by adding Hildebrand kilns. The next batch of kilns

came from Cathild in Quebec, while the last three have been Nardi kilns sold and serviced in North America by Better Built Kilns out of the southeast. "They're Italian kilns, but Better Built comes up to install and start up each one," Jacob says of the mix of imported technology and regional service. "At one point we were putting up a kiln just about every year, but with space constraints and markets, we've tapered off. We do send out some products for drying, but we can handle most of what we need right here."

That's not to say investment in kilns is totally out. Just this year CFP added an 18,000 bdf wood steamer from Ontario's Porta-Kiln. Designed to tap into the currently hot market for walnut, it is flexible enough to serve other purposes if (or when) designers tire of treated walnut. "Walnut's popular right now, but these things come and go. The steamer is sized to create a quick conversion to heating chamber if necessary."

Cutting Out Waste

When it comes to the lumber business, a large part of CFP's business is in giving a wide array of clients exactly what they want, and nothing more. Up until recently, the lion's share of cut-to-size work was done on the mill's dimension line added in 1992. It includes 12 manual chop saws set up in line with a ripping line. It can be a busy place when business is booming, but Jacob says it didn't give CFP enough flexibility.



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“We were getting more and more orders where we didn’t need to chop the lumber – The customer just wanted it ripped to a given width. It wasn’t effective doing it on the dimension line, as the chop saws were idle while we just ripped lumber all day.”

The result is a completely new building housing CFP’s latest, and largest investment: A dedicated, optimized rip line and a breakdown/grading/stacking line. The two lines were started up over the past 10 months, and built by T.S. Manufacturing as a turn-key project with Autolog optimization and controls. The line can either rip or plane lumber as required, with a capacity of 50,000 bdft/day of ripped strips.

“We’ve always done a lot of dimension work, and our idea with that, and the new line, is to be an outside source that can supply clients exactly what they need for all, or a part of their inventory, with more efficiency and no waste on their side. The little extra they pay is more than made up for in most cases by reduced labour, waste, and inventory costs. The new line just gives us a lot more flexibility. Let’s say a cabinet maker does a lot of smaller orders, so that lengths are changing each time so they can’t order cut-to-size pieces. Still, they may need a lot of the same width pieces over and over again. That’s where we can help with this line.”

Production starts with an infeed deck and tilt hoist to singulate lumber. From here it goes through the Autolog optimizer, which will tell the operator the best yield based on order files. “The operator will take that into consideration, but they make the final decision via a yes or no choice. Nine times out of 10 it’s yes.”

The system reads warp, bow, and other geometric issues to assist the operator. Autolog also did all the optimization and PLC work on the new grading line just across the shop floor. The new line also has a Brookhuis moisture control system to kick out wets.

The heart of the new line is a Merein Johnson 40-in fixed arbour rip saw. This can be by-passed in favour of a new Newman-Whitney EPR-24-SS planer with quiet cut head. “We can’t do both in the same run – it’s set up either or, but for our needs it works well that way.”

A five-bay bin sorter rounds out the line, taking the main products. Less common products are dropped down to a manual sort.

The grading line also starts with a tilt hoist and singulator. This feeds dual T.S. Manufacturing grading stations with Autolog grader-assist geometric scanning and tally system. The line is used both to process and stack internal production for drying, or to break out and evaluate lumber from outside sources so the mill knows almost immediately what it has bought.

Either way, lumber is split between two grading lines, with the PLC monitoring flow to each line’s surge deck. Lumber gets dropped into each station, with the operator sitting right above the piece, roughly one-third of the way across the deck, for an excellent view. Lumber is turned automatically, with the operator registering grades into a control panel.

“The goal with this line is to deal with some of the



Once singulated, lumber on the new dedicated ripping/planning line goes through a Brookhuis moisture meter and Autolog scanning for optimal ripping solutions.

labour shortage issues, especially in tough areas like lumber stickering and stacking. This increases the stickering quality through automation, and gets our production to a steady 50,000 bdft/shift in grading/stacking.”

This line only started up in July, so when *CWP* was on site in mid August, the crew was still dealing with start up issues to ramp up production. “It’s really the largest project we’ve ever done like this, with the extent of optimization and automation. We’ve never done something like this before, so I guess we are surprised by how long it takes to sort things out and get it all running together. But we can see where the benefits will be when it’s running like we want.”

Back to Roots

CFP started in pallets, so of course it has not neglected its Barco pallet division. Significant investment in recent years includes adding a Brewer resaw system three years



The new optimized rip line includes a drop out option for planing on this Newman-Whitney EPR-24-SS planer. The carefully plumbed dust collection system in the new building is from N.R. Murphy Ltd.

ago to “significantly increase” cant breakdown for hardwood pallets. “It has been very reliable,” Jacob notes, “and very productive for us in terms of production and labour. It was another labour-intensive area that we’ve managed to improve.”

Barco has also added a Viking Turbo 505 pallet assembly line that puts out 10 loads of pallets a day with minimal labour input and greatly reduced risk of injury. The operation was also among the first to start heat-treating its pallets, and still has an edge in this field.

“We had the kilns already, so we could do the heat treating and keep quality up from day one. To some, a pallet is a pallet, but to us it’s more of a packaging system approach. We’ll work with customers to see what they’re using now, and where that could be improved to get the right pallet or package for each job, but no more. We look for optimized packaging.”

Of course, as is the case with its other markets, location is also an asset for the pallet division. Barco is right on the doorstep of Toronto and the golden triangle. It’s as valuable for the pallet division to be on the edge of Canada’s manufacturing heartland as it is for the custom cutting and ripping operations to be a stone’s throw from one of the country’s largest custom building and renovation markets. Either way, it’s not a bad view for an evolving hardwood operation.





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Accumulated Risk

When it comes to hydraulic accumulators, what you don't know can kill you.

by **Al Smiley Jr.**

What do you normally discuss at safety meetings? PPE equipment, chain guards, safety harnesses, lock out procedures – these are common topics. When was the last time hydraulic accumulators were discussed? If you're like most plants, the answer is never. Why? Because most plant, maintenance and safety managers are not aware of the dangers that exist with accumulators.

Pre-Charging

An accumulator is a storage device in a hydraulic circuit. It is the hydraulic equivalent of a capacitor in an electrical circuit. The two most common types of accumulators are the bladder and piston types. The bladder (Figure 1) is nothing more than a rubber balloon that separates the hydraulic

oil from the dry nitrogen. Dry nitrogen is used to fill the inside of the bladder to a pre-charge level. The piston in a piston type accumulator (Figure 2) separates the nitrogen from the hydraulic oil. The nitrogen pre-charge is usually 1/2 to 2/3rds of the maximum pressure in the system. When the pump is turned on, the nitrogen is compressed to the maximum pressure in the system. The setting of the pump compensator spring determines the maximum pressure when a pressure compensating pump is used. The relief valve setting determines the maximum pressure in a fixed displacement pump circuit. In Figure 3, the bladder accumulator has been pressurized to 2,000 psi.

When the pump is turned off, the pressurized fluid in the accumulator must be released back to the tank. This is done either by an automatic or manual dump valve. If this

pressurized fluid is not bled back to the tank through the dump valve, then the accumulator remains pressurized. The accumulator then becomes a one-shot hydraulic pump. If a valve were to inadvertently shift, then the pressurized fluid would be

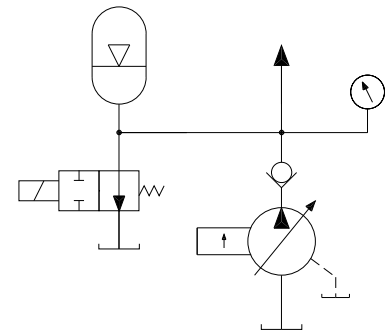


Figure 4. A common type electrical dump valve.

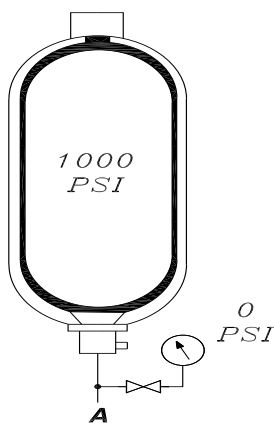


Figure 1. The bladder is nothing more than a rubber balloon that separates the hydraulic oil from the dry nitrogen.

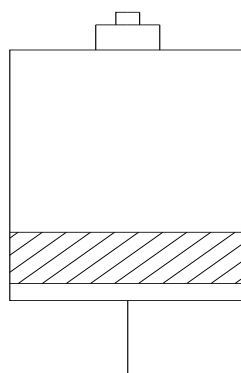


Figure 2. The piston in a piston type accumulator separates the nitrogen from the hydraulic oil.

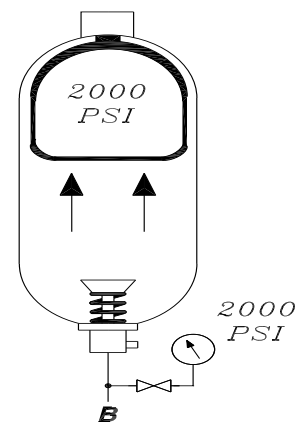


Figure 3. The bladder accumulator has been pressurized to 2,000 psi.

directed to operate the cylinder or hydraulic motor. This, of course, results in the load moving, which can be hazardous or deadly to maintenance or operating personnel.

Auto Dump Valves

Many systems use automatic dump valves. These are operated either hydraulically or electrically. A common type electrical dump valve is illustrated in Figure 4. When there is no electrical power to the solenoid, the valve spring shifts the spool to the open position as shown. This allows any pressurized oil in the accumulator to return to the tank. The solenoid on the valve is usually wired into the electric motor starter. When the motor is started, voltage is applied to the valve solenoid causing the valve spool to shift closed. Flow from the pump and accumulator is now blocked back to the tank.

So, if your systems incorporate automatic dump valves why should you be concerned? Because like any other hydraulic component, these valves can fail. The valve may fail open, causing a loss of speed and /or pressure. However, if the valve fails closed, then the accumulator remains pressurized.

Consider what happened at a plant a few years ago. This system had an electrically controlled dump valve, which opened once the pump was turned off. Everyday at 3:30, the plant was shut down for 30 minutes for changing shifts. During this time, the operator would frequently change the knives on the chipping heads. The operator followed all the mill safety procedures for locking and tagging out the machine. There was no written procedure for checking the gauge at the accumulator to verify that the pressure inside the accumulator had been released back to tank through the dump valve. If the operator had looked at the gauge in this one particular instance, he would have seen that there was 1,500 psi still locked in the hydraulic lines. What he did not know was that the accumulator dump valve had failed closed. While knives were being changed, a co-worker crawled over the infeed conveyor, which enacted a



Figure 5. I think they meant compressed nitrogen, a rather explosive mix-up.



Figure 6. A breakdown of the accumulator, minus the bladder.

photo eye. An electrical signal was then sent to the chipping head valves to shift. The accumulator discharged oil to the cylinders, which extended the chipping heads, crushing the operator. Had the operator been instructed to verify that the hydraulic pressure had bled down to 0 psi when the machine was turned off, he might be alive today.

Manual Dump Valves

Other systems have only a manual type valve, which must be opened to bleed the pressurized fluid in the accumulator back to the tank. In this case, all individuals working on or around the machine must know where the valve is located, and that it should be opened. How much training does a new millwright or electrician get in your plant regarding hydraulic safety? Normally little or nothing is said about releasing pressure in hydraulic accumulators.

One company hired a new

mechanic who was being trained on the job by a Class I mechanic. The Class I mechanic failed to tell the trainee about opening a manual dump valve prior to working on one particular machine. One week, the Class I mechanic was on vacation, and the trainee had to change a cylinder on the machine. When he loosened the fitting on the hose at the cylinder, 2,800 psi discharged from the line. His safety glasses were knocked off, and oil was injected into his eye. Today he wears a special lens due to the 40% vision loss as a result of the accident. If a written procedure to achieve a zero energy state had been in existence, then this accident would not have happened.

Dry Nitrogen or Air?

Accumulators should always be charged with dry nitrogen, never oxygen or compressed air. Dry nitrogen, while technically not an “inert” gas, does not react readily with other chemicals. Oxygen and compressed air, as we all know, aid combustion. Most accumulators have a safety sticker on the accumulator shell warning that only nitrogen should be used to pre-charge the accumulators. One of our consultants was working with a plant a few years ago, and found an accumulator in the mill labeled “Danger – Compressed Air” as shown in Figure 5. This was found only two days after an OSHA inspection of the plant!

Why would anyone put this sign on an accumulator? Could it be because many people have a well at their homes, which has an accumulator that is pre-charged with air? The person that put this sticker on the accumulator most likely recognized that the Schrader valve used to refill with nitrogen looks very much like the accumulator in his well system, bicycle or car tire. Also notice that the actual warning sticker applied by the accumulator manufacturer is covered up by the piece of wood underneath the chain clamp! Fortunately, compressed air had never actually been used in the accumulator. But if someone had ever filled it with compressed air, as the sticker suggests, the bladder could have ruptured and the

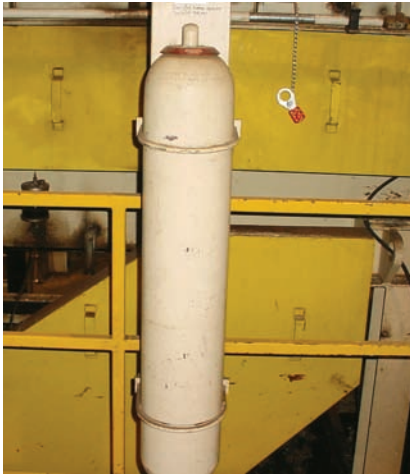


Figure 7. This accumulator is properly clamped.

result would have been an explosion or possibly a fire at this plant. Needless to say, our consultant had this sticker removed immediately.

Mounting and Removal

The accumulator should be properly clamped to the mounting fixture. In

Figure 6, a breakdown of the accumulator, minus the bladder, is shown. When assembling the accumulator after bladder replacement, the retainer ring is fitted around the outside of the poppet valve, and both are inserted into the accumulator shell. The nut then tightens the poppet valve and retaining ring to the shell. If the accumulator shell is not properly clamped, then failure of the retainer ring can cause the poppet valve to disconnect from the accumulator. This can cause the shell to take off like a rocket. Figure 7 shows a properly clamped accumulator.

Prior to removing and storing an accumulator, the nitrogen pressure should be released and the protective cap should be installed over the Schrader valve. One plant only had a single accumulator, and every time the accumulator needed pre-charging, they removed it, laid it in a pickup truck, and drove it to the nearest shop. If the Schrader valve would have broken off or the retaining ring

failed during this transport, the accumulator would have once again acted as an unguided missile.

One of the most common remarks made by students after they attend our training workshops is "I had no idea about the dangers of accumulators". Don't wait until some one is injured or killed to educate your mill personnel on accumulators. If you do not have anyone qualified to speak on this subject, please contact our company for a safety presentation at your plant.



Al Smiley Jr. is a hydraulic systems specialist working with the forest products sector across North America to maximize mill efficiency and minimize downtime and operating costs. He wrote this article specifically for Canadian Wood Products Magazine, and can be reached at GPM Hydraulic Consulting, Inc., P. O. Box 376, 797 Ridge Rd., Monroe, GA 30655, 770-267-3787, Fax: 770-267-3786, gpm@gpmhydraulic.com, www.gpmhydraulic.com

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Double Vision

What you can't see can hurt you if you're a BC mill dealing with beetle cracks or an eastern mill with balsam fir and rotten boards. Mills are reacting with combined geometric and vision scanning.

by **Scott Jamieson**



Like many sawmills in the BC Interior, L&M Lumber and Lakeland Mills have been struggling with the effects of dry, brittle beetle kill lumber. The two independent, modern sawmills are no strangers to scanning and optimization technology, but as beetle kill wood ages, it tests the limits of most traditional optimization packages. Solutions deemed acceptable by even the most impressive full-profile geometric scanners are chosen, only to have the cracked board explode further down the line. Lost production time, slower feed speeds, and reduced recovery are the results.

"These mills were having to slow down production speed at the sawmill edger to deal with the cracks from the beetle wood," explains Yvon



The DynaVision chroma+scan 3300 sensor from LMI Technologies can detect board defects earlier in the production process. The sensor is shown here installed on a Comact EdgeExpert system in the BC Interior. Photo: Courtesy Comact.

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Hubert, VP optimization and controls at Comact. So late in 2007, the sawmill supplier installed a retrofit to the mill's Comact transverse edger optimizers to deal with the issue. The solution came in the form of new scanners from LMI Technologies. The DynaVision chroma+scan 3300 sensor integrates high-density 3D differential profiles and true colour vision for defect detection that includes the cracks giving BC Interior sawmillers their own version of the shakes.

Combining these two technologies into a single sensor system provides the sawmill with the means to increase the value of each cutting

Continued on page 30



Knots are displayed on the Comact optimizer GUI.

An eye on hardwood scanning

Automated grading options are rapidly evolving for Canadian sawmillers, and while the focus has been on the much larger softwood sector, hardwood sawmillers are not being left out. One option now on the market is the WoodEye option developed in Sweden by Innovativ Vision and represented for several years now in North America out of Norcross, GA by WoodEye North America.

The supplier is perhaps best known for chop saw optimization, but its WoodEye Hardwood Grader recently won a Challengers Award at the International Woodworking Forum (IWF) held in Atlanta this past August. "We are very proud to have been named a winner among 125 entries," says Claus Staalner, president of

WoodEye Inc. and a long-time player in the sawmill optimization field. "The possibility to machine grade hardwood will have a great impact on the market," he adds.

The system uses several hi-res cameras and detection methods to identify a wide range of defects, including knots, cracks, checks, wane, discoloration, and many more. These are then compared against a set of user-defined grades that can be straight NHLA (FAS, Select, etc...), a combination of these on one or more sides (i.e. FAS on one face, #1 Common on the others), or proprietary grades for customer-specific or internal needs. All grades may be run at the same time to maximize value return, or separately by run. The first system has been sold to a mill in the northeastern US. Stay tuned.

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The Kara circular sawmill was bought new, and was chosen for its simple design and maintenance needs. With sawdust, shavings and slabs all available, and a cold climate, Bowie is looking into bioenergy options. For now, slabs are cut into stove-length by a North American Machinery firewood processor.

Yukon Timber Rush

Arctic Inland Resources is serving the local Yukon market with a mix of new and slightly used gear.

by **Wayne Potoroka**



Two years ago, Bill Bowie, owner of Dawson City, Yukon-based Arctic Inland Resources Ltd., had a difficult choice to make. After 33 years in the logging business, it was time to either pack it in or pick it up.

“The sawmill was wore out,” explains Bowie, 64, referring to the mill he assembled in 1975 partly from post-Klondike Gold Rush-era steel salvaged at the local dump. “The equipment was old and wore out. The people were old and wore out. Either we had to get out of the sawmill and logging end of things or reinvent the wheel and get back into it,” he adds, before motioning toward a board-and-batten-clad 3,600-square-foot building. “Obviously, the decision was made to get back into it.”

The structure barks out a conveyor’s belt worth of sawdust from Bowie’s brand-new Kara Master Y sawmill as he describes finding a suitable home for his new milling operation.

“I needed two things: ready access to the highway and ready access to the power line. Boy, was it a problem,” says Bowie, explaining how hard it was to find the right piece of land in an area that’s been mostly turned upside down by a



Bill Bowie with some Yukon timber. It’s a mix of large and small, all sawn to serve territorial markets.

century of gold mining. He eventually found the perfect spot, on a reclaimed waste-metal dump a few kilometres up the Klondike River valley from his retail lumber yard.

"It was supposedly contaminated because it was an old garbage dump," he says, "but we put it to some constructive and productive use." Once the site was prepared, Bowie had cleared a major hurdle and was able to move to the next phase of revitalizing his business: setting up his new mill.

Kicked Up Pace

"Relative to our old mill, which was a similar-sized conventional circular head rig, this mill will be faster," says Bowie, "and simply more accurate. We'll get better recovery out of the logs."

Much of the peripheral equipment that flanks the new Kara mill was moved over from Bowie's old operation. "The firewood processor that cuts slabs into stove lengths was built by North American Machinery in Killaloe, Ontario about 20 years ago," says Bowie. "We have an old Sherman (USNR) edger that we've reconditioned and inserted into the production line. It's probably older than you are," he adds, with a chuckle. "But it's an old brute of a machine and it'll do the job for us."

Much of the mill's material-handling gear was fabricated from used equipment purchased in Edmonton and subsequently "cannibalized and reconfigured to do the job." Bowie also lists an impressive inventory of items that were manufactured on site: "The log deck; the chain deck that takes the log into the mill; the green chain that takes the lumber away; and some conveyor belts and sawdust blowers.

"We just had to cut it apart and reconfigure all the pieces to make it work," says Bowie, "and we're still cutting and fitting to get it right. Eventually we'll have it."

The new setup is a vast improvement over the mid-70s model Bowie used up until this year, with perhaps the biggest improvement being the ease with which one person can operate the mill.

"Say I have a small order to run off and the mill was shut down," explains

Bowie, "I can start up and run with one man without having to put on running shoes and run all over the place. I can stand there and cut up a deck full of logs."

Bowie also points to the Kara mill's simple, non-computerized setup as a definite advantage in this remote northern community, a mere 266 kilometres south of the Arctic Circle.

"It's pretty basic stuff. There's nothing mysterious about it," says Bowie. "We intentionally bought equipment we would be able to maintain ourselves." Bowie admits to running into a few problems since the mill has been online, but he chalks most issues up to the frustrations inherent in learning the movements of a new machine and him "doing the engineering and designing on the back of a cigarette package."

As a result, Bowie hasn't realized an increase in output quite yet, and the mill was only operating at 50 per cent capacity in June 08 while various bugs are excised and modifications made.

"When we're up to production we'll

be putting out about 10,000 board feet in an eight-hour shift," says Bowie. He expects the maximum mill flow rate to be around 2,000,000 board feet annually, although he admits the short-term goal is "to get slightly above a million board feet a year." Even still, this represents a substantial increase from the 750,000 board feet Bowie coaxed from his old mill each season.

The increased production will fuel Bowie's expansion outside of Dawson City's boundaries.

"The market in Dawson is very restricted, no opportunity to grow at all" he says of the pocket-sized community of 1,800. Bowie recently opened another lumber yard in the territory's capital that he plans to keep stocked with products he produces in the Klondike.

"In Whitehorse, we're in a much bigger market," says Bowie, "and essentially gain access to the whole Yukon."

Bowie also purchased a few industrial-grade heat exchangers he hopes down the road will give him the

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ability to expand his line of specialty wood products.

"I'll be able to plumb them in to one of those little wood-fired boilers and make a rudimentary dry kiln," says Bowie. "We'll be able to get into the siding market and [produce] finished product where we can get a much better price for the wood."

Bowie has looked even further into the future to a time when his new mill satisfies some of his community's energy needs.

"As with all sawmills there's a pretty significant portion of the wood that we harvest that doesn't make lumber," says Bowie. "The logical opportunity for us to deal with sawdust and shav-

ings is in the energy side of the equation particularly with the way fuel prices are going."


One idea that Bowie has is to use his sawdust and excess wood to heat the town's subterranean water lines that snake through the permafrost, in winter, and valve that same heat over to the local swimming pool, in summer.

"The only thing that exists right now is the opportunity," says Bowie. "There are boiler systems on the market that will burn that sort of stuff in small- to medium-sized applications. It's certainly within the realm of reality."

Converting waste-wood material to energy is still a ways off for Bowie. Nearer the horizon is christening his new mill and perhaps giving it a name

("Maybe George. I haven't decided yet."), and dealing with the remnants of the old mill that was once the backbone of his business, but now sits alone in the bare, saw-dust covered field just north of his office.

"The frame underneath [the old mill] was originally the gangplank of the number three dredge," says Bowie, referring to the floating hulks that mined much of the Yukon's gold. "We've been speaking to Parks Canada and we understand they need a gangplank for [National Historic Site] number four dredge.

"Number three was its twin," he adds with pride, as if talking about an old, loyal hound, "so, it might be going back to its home." 

MAILBAG

More on Green Wood

Mr. Jamieson,

I am a reader of *Canadian Wood Products*, and am writing to you about the market for certified wood (editorial, July/August 2008). As you are aware, sustainable forest management certification is a controversial topic. Notwithstanding the controversy, most observers will agree that little is known about market demand for certified wood products – especially solid wood products used in the construction industry. To shed light on this issue, last winter I was asked by the WoodWORKS! programme of the Canadian Wood Council, and the Canadian Forest Service division of Natural Resources Canada, to lead a group that would look at "green" building rating systems. We produced a report called "Certified Wood and the Impact of LEED" which looks closely at the Canadian market and seeks to quantify most aspects of producer, distributor, fabricator and market experience.

Later, in August, the US Green Building Council (USGBC) happened to launch a review of its certified wood credit – which specifies the Forest Stewardship Council (FSC) – and I responded with a request that the USGBC release details of certified wood use that it (the USGBC) has been collecting for the last eight years. (If you have ever seen the LEED® submittal form for certified wood, then you will understand immediately how much information the USGBC now possesses). The letter made several specific requests – starting with an acknowledgement of how many projects had actually achieved the FSC certified wood credit. I took this action to assist all those who wish to participate in the public comment period that it (the USGBC) has initiated. Unfortunately, I have not had any response to my letter – not even an acknowledgement of its receipt – despite several follow up enquiries.

A copy of my letter appears below. I strongly believe that

this industry – and the green building movement – will benefit from transparency in the development of standards, codes and design guides; and sharing information. I hope that you also share this view, and will also consider printing my letter to the USGBC.

*Marshall Leslie,
Toronto, ON. marshall@mleslie.com*

Editors' Note: I do, and here it is.

To USGBC: Release data on certified wood
Regarding the USGBC's one-month public comment period on proposed revisions to its certified wood credit, I believe that the USGBC has "narrow-scoped" their proposed changes to a palatable minimum while maintaining the status quo. In part, this was done by setting its MR TAG and the MR TAG's consultant just two tasks: one, to perform a desktop comparison of certification systems; and two, to define a prototype certification benchmark for use in LEED.

Unfortunately, all of the work of the MR TAG and its consultants has been performed without any basic information about what is happening in the forest, the supply yard, or the construction site. The certified wood submittal form that everyone who uses FSC-certified wood must complete requires very detailed information to be provided to the USGBC. In fact, more information must be submitted to the USGBC to achieve credit MRc7 than any other LEED point.

What happens to all this information? Why, for example, won't the USGBC tell its MR TAG, its members, and the community at large how many LEED-certified projects have achieved the certified wood credit? This and other important information would provide a more useful knowledge base than the esoteric minutiae contained in the MR TAG reports.

MOBILE MILLING

Seriously portable, serious production

According to Davco Solutions marketing representative Jeff Pearce, the company's Twin-Cut Mobile Automated Sawmill is a "seriously portable, circular sawmill capable of producing 20,000 bdf t per shift on a consistent basis with a three-person crew: Operator, loader operator, and lumber piler. Designed to fill the gap between the smaller portable mills and larger stationary sawmills, the Twin-Cut uses two 26-in circle saws aligned one on top each other (lower cutting down; upper cutting up through). At the end of the cut, the saws rotate, allowing them to cut right back



down the log rather than wasting time travelling back to start the cut. This bi-directional cutting is coupled with low fuel consumption (10 litres/hr) and low-maintenance, inserted saw teeth for very efficient operation. The trailer-mounted unit comes with computer networks, climate-controlled, quiet cab, retractable log deck and loader, log carrier, retractable outfeed deck, and can be set up in less than 40 minutes. It efficiently handles log from 5- to 28-in diameter and from 8- to 20.5-ft long. Look for more on this system in coming issues. www.twincutsawmill.com

CARRIAGES

Move the saw, not the carriage

AWMV Industrial Products has a new high-production bandmill that combines a travelling thin-kerf sawhead with a stationary log carriage. The 4250SCH is unlike traditional mills in that the carriage - built for AWMV by Creelman - doesn't move. Instead the 17-degree slanted sawhead moves back and forth through the log. With a 50-hp motor and 42-in bandwheels, it offers high-speed processing, high yields, and low operating costs. The 4250SCH

is equipped to process logs from 8- to 48-in in diameter and up to 18 ft long (extensions to 36 ft) via ultra thin-kerf 50mm wide bandsaw blades. "The 4250SCH offers a lot of flexibility," explains AWMV Industrial Products VP Kevin Corder. "It can run as the primary headrig, a grade saw, a long log saw, or as a supplement to a breakdown line. At any stage, it reduces operating costs, produces high yields, and ultimately provides higher profits." www.awmv.com

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Double Vision

Continued from page 25

decision at the sawmill edger and trimmer, reducing production logjams there and further downstream, reducing wasted processes on unsound lumber (i.e. drying or planing unsound pieces), and allowing some mills to target certain boards for added value or customized processing. This field-proven technology provides early detection of wood defects, such as cracks, stains, knots, and pitch pockets from the boards, allowing mills to move defect detection from the planer mill to the sawmill, moving from damage control to proactive, optimized sawing in the process.

Early detection

At L&M Lumber and Lakeland, the retrofit install of the chroma+scan 3300 sensor allows the optimizer to consider not just geometric information in creating a cutting solution, but also defects like cracks. "The cracks from the beetle kill wood can be factored into the optimized solution,"

Hubert says, "or the mills have the option of just rejecting the board right there rather than allowing it to split up and cause downtime."

There are more applications for this technology, and Comact has been using the chroma+scan 3300 to help solve other customers' challenges. In the case of one southern yellow pine (SYP) mill in Georgia, Tolleson Lumber, a retrofit at the sawmill trimmer is helping the mill look for opportunity wood rather than trouble pieces. The mill is using the scanner/optimizer package to target clears, which are sorted out and processed into value-added, custom products. It's an approach that would also fit today's hardwood mills, as they try to maximize NHLA grade values while making special products with the downfall.

Another mill in New Brunswick has ordered a sawmill trimmer retrofit with chroma+scan sensors to identify rot in its balsam fir lumber. This way the problem pieces can be rejected or the rot removed at the sawmill,

instead of wasting precious drying and planer time. There are also hardwood applications for this technology, although Hubert cautions that they are just getting started with the chroma+scan 3300 in this segment. The supplier has installed the system at a Quebec hardwood mill, and is currently working to reach NHLA standards. Hubert adds that the new technology opens up many options for sawmillers struggling to improve margin.

"Mills can now make better decisions at the edger. Colour vision provides a solution for specific problems that have occurred, such as split wood. They can also do a better job sorting out specific target products at the trimmer, or remove problematic rot right there, without wasting any more production time or investing more money in the board."

When it comes to rot in fir or cracks in beetle kill pine, even what you can see can hurt you. It just hurts a whole lot less if you see it, and deal with it, early.



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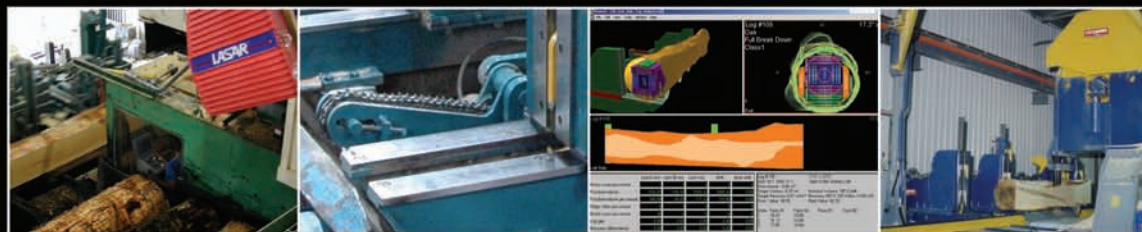
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