Steering towards specialty markets

Tolko is making a conscious decision to steer clear of the commodity market, choosing instead to focus on the industrial and specialty markets with its new $250 million OSB/OSL plant in Slave Lake, Alberta.

By Tony Kryzanowski

The main market focus for Tolko’s Slave Lake plant—capable of producing 825 million square feet per year on a 3/8ths-inch basis—will be the industrial market, manufacturing products such as flooring for tractor trailers, railcars and containers.

Tolko Forest Industries planned to produce its first board from the company’s new $250 million oriented strand board (OSB) plant located near Slave Lake, Alberta in September, but this is no ordinary commodity-driven OSB plant.

“We have built a plant that is going to stay out of the commodity market,” said plant manager, Heinz Zierl, to a group of industry suppliers at a recent forest industry event.

Zierl made it clear that the Slave Lake plant will not produce OSB panels for floors, roofs, and siding in competition with so many other OSB plants chasing the current sagging housing market.

Its main focus will be on the industrial market, manufacturing products such as flooring for tractor trailers, railcars and containers. The plant will also produce some specialty housing components.

For example, it has targeted a portion of its production to supply a new $5 million I-joist construction beam plant, being built by Tolko in Sturgeon County, north of Edmonton. Originally slated for completion this fall, completion of that plant has now been re-scheduled for fall, 2008. The move was prompted by reduced market demand for I-joist products precipitated by a more than 20 per cent drop in housing starts in the US and low OSB prices.

The Slave Lake plant will also produce a relatively new engineered wood product, oriented strand lumber (OSL). This is an engineered wood product manufactured from longer strands and cut into longer, narrower lengths than conventional 4’ x 8’ OSB panels. Just as OSB has built its market as a substitute for plywood in building construction, the target market for OSL is as a substitute for thicker and longer length solid lumber used in commercial applications.

The argument is that OSL is a superior product when used this way because it can be engineered to meet certain requirements more exactly compared to solid wood, which is limited by what Nature provides. Longer, thicker lengths of solid wood are also becoming more difficult and expensive to obtain due to increased demand.
difficult to find. Tolko is anticipating that up to 0 per cent of its production from this engineered wood plant will be OSL. While the plant will start production by manufacturing OSB panels in 24-foot lengths, it has been designed so that it can make panels up to 72 feet long, anywhere from 1/4 inch thick to 2-1/2 inches thick. Right now, the plant is working with its marketing department to establish customers who would purchase products up to this length.

The launch of production at Tolko’s engineered wood plant within its Athabasca Division in Slave Lake is good news for Alberta’s beleaguered forest products sector. The Alberta Forest Products Association (AFPA) reported in June that over the previous two years, the value of the province’s manufactured forest products had fallen by 29 per cent. It is also good news for the nearby town of Slave Lake, which suffered job losses when Tolko announced recently that it would be closing an older OSB plant it had acquired from Weyerhaeuser, located not too far from the new plant.

“That mill was unable to make a profit in this market,” said Zierl. “It was capacity limited.” The new plant will create about 125 new jobs and is capable of producing 825 million square feet per year on an 8ths-inch basis. Wabi Development Corporation was project management and construction management consultant on the new plant. This is Tolko’s second greenfield OSB plant project in Alberta; it also operates another plant in High Prairie, built about 12 years ago. Zierl made it clear that the company has not followed the same path on how it has equipped the new Slave Lake plant. The High Prairie plant featured a number of equipment components that were the first of their kind put into commercial production. He gave the example of the conveyor dryers installed at the plant, instead of the more conventional rotary strand dryers.

“You can dry virtually any length of strand and the drying process will deliver the furnish to the press at about 55 degrees Celsius,” Zierl said. “This is a very attractive temperature because it shortens up your press time considerably.” However, he added that since their installation, Tolko has made significant investments so that the dryers operate to their full potential. “We decided that we would try to stay away from serial number one equipment (in Slave Lake) and buy things that were proven,” Zierl said.

While that may be the case for equipment, that is not the situation as far as management practices are concerned. The Slave Lake plant has adopted an unconventional approach to log yard management first proven by Tolko management at its newer OSB plant in Meadow Lake, Saskatchewan.

It has contracted out the management of its log yard to a Grande Prairie company, Minhas Logging. “We feel from a financial point of view that the cost savings are worth contracting it out,” explained Zierl. Every day the plant receives an average of 200 loads of logs, each log cut to 17 feet, two inches in the bush. The log diet is about 70 per cent aspen and 0 per cent black poplar sourced from both Crown and private sources. The plant is able to use some softwoods, such as spruce, pine and balsam, and may be able to accept some mountain pine beetle-killed wood.

The logs begin the process in conditioning ponds before being conveyed into the 400,000 square-foot building. It was planned with expansion in mind, with enough room for more strander, pond, and dry screening capacity, and with larger dryer drums. It was also constructed so that all operations are under one roof to promote team building. “We said that at least once a day we are going to sit together, have lunch, and get to know each other,” said Zierl.

The logs are debarked with Finnish-made Andritz debarkers. Zierl said Tolko chose these debarkers because logs can be debarked in a batch and are molded, like working an orange
The debarked logs are stranded using 44-knife Carmanah stranders. These are identical to stranders operating at Tolko’s OSB plants in High Prairie and Meadow Lake so that the company could save money on maintaining a smaller spare parts inventory through standardization.

The green strands are dried using two Buttner dryers with a capacity to process about 65 tonnes of seven-inch long strands per hour per dryer. Heat for the dryers is provided by dedicated GTS energy systems. Both the stranders and dryers are designed to handle seven-inch strands, which is the standard length for manufacturing OSL.

The strands are mixed with prescribed batches of resin in Coil blenders before being spread on the Siempelkamp forming line. The mat on the forming line will be steam pre-heated, which will collapse the mat somewhat and raise the mat temperature to reduce the amount of time each board must spend in the press. The steam temperature can be adjusted as needed. The eight-foot wide mat then proceeds through the 72-metre-long, Siempelkamp continuous flow press. At the time of its commissioning, it was the longest continuous flow press in the world.

Once pressed, the OSB panels are cut to their finished length using two double diagonal saws located after the press, and cooled on three star coolers. Once cooled, the panels are processed through the Siempelkamp finishing line, then placed in either short-term or long-term storage.

They can be shipped to market by either truck or rail. The plant’s rail line will not only be used to ship some product to market, but will also be used to transport logs to the plant from more remote locations. There appears to be a trend to designing more diversity into new strand-based plants, as the Tolko facility in Slave Lake is one of two plants in Alberta that will have the capability of producing OSL. Tolko is also working with the Alberta Research Council to develop a range of products suitable for production from the company’s new plant.

The Slave Lake engineered wood plant is another significant asset being added to the growing forest products business owned by Tolko’s Al and John Thorlakson. Based in Vernon, BC, the company has sawmills, OSB plants and a pulp mill located near various communities in Western Canada. The Thorlaksons started out in the forestry business with a single planer mill in Lavington, BC just over 50 years ago. The company was founded by Al and John’s father, Harold Thorlakson. Control passed to Harold’s three sons in the late 1970s. One son, Doug, eventually sold his share of the company to focus on other interests, leaving Al and John to lead the company.

Tolko passed a significant financial threshold in 2004 when the company purchased BC’s Riverside Forest Products. This purchase essentially doubled the size of the company, increasing the workforce from about 2,400 to 4,500 employees working in 18 forest product facilities. In 2006, the company had sales of $1.9 billion and shipped product to 20 different countries. About two-thirds were shipped to the United States, 25 per cent in Canada, and the rest to other export markets.