

# INNOVATION is their hallmark

By **JenniferMcCary**

## New ideas, veteran staff make Jones' hardwood mill a strong performer.

**L**ike a seasoned chess player, J. Wilson Jones Jr. is always planning two or three moves ahead of where he is at any given moment. A veteran sawmiller of nearly 50 years and owner of two sawmills and a chip mill, Jones has earned respect in his industry for his innovative vision and hands-on approach to equipment development and modification to achieve that vision. One such innovation installed at the lumberman's hardwood mill, Mackeys Ferry Sawmill, Inc., in Roper, NC is a good example.

In the late '90s Jones and sons, J. Wilson III, 44, and Stephen, 40, worked with USNR to develop and install the first combination green and dry trimmer-sorter line in the U.S.

"We figured if you could detect board thickness and width, and tell it whether to go to this or that bay, you could tell it whether that board was wet or dry," states the owner. The first system was installed at Jones' pine sawmill, J.W. Jones Lumber Co., Inc. in Elizabeth City, NC in 1996 and at Mackeys Ferry in 1998.

Wilson III, who manages Mackeys Ferry Sawmill, vividly recalls that startup. "The second week after we started running lumber across this sorter my wife and I had a baby girl," he proudly reports, then jokingly adds, "I can tell you that becoming a 37-year-old first time father is a lot harder than trying to get a sawmill to run!"

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Operating with 70 employees, the Mackeys Ferry facility produces about 15MMBF per year.





J. Wilson Jones Jr. with son Stephen

The system significantly enhanced efficiency and flexibility at both operations, although Elizabeth City stopped running dry lumber on it after it installed a curve sawing gang five years ago, thus boosting throughput beyond the sorter's capacity. The system continues to perform exceptionally well at Mackeys Ferry.

Managers continue to tweak the trimmer-sorter line's performance, thanks in large measure to the in-house expertise of process controls manager Bob Gaston and electrician Terry Morgan. Both men have been involved in most of the upgrades and expansion projects undertaken at all the family's operations.

Species mix at Mackeys Ferry is primarily poplar, soft maple and cypress. At one time all hardwood lumber went to furniture markets in nearby High Point, NC. Today roughly 80% of the facility's 15MMBF production is exported to China via wholesale brokers. "We have a terrific advantage going to the port because it is only 75 miles away," notes Wilson III.

Cypress production averages about 3MMBF annually and is sold domestically as specialty pattern products. In addition, the facility's planer mill has a contract to dress cypress lumber for Williams Lumber Co., Rocky Mount, NC.

## More Upgrades

Other equipment upgrades in the mill include a USNR/Schurmann edger with USNR/Applied Theory optimization ('01), an additional USNR high-temp kiln ('03) and an optimization and drive upgrade at the headrig last year.

In February 2005, a USNR/Perceptron Lazar 3-D scanning and optimization package replaced older photocell technology at the McDonough 6 ft. headrig and carriage. In September, managers replaced what is believed to be one of the last two steam powered shotgun feeds still in operation in the state. The second one at Elizabeth City was also replaced last year. Jones installed a 385 Tyrone hydraulic drive with two 150 HP motors. Benefits of the upgrade include a yield increase of 4.5% and throughput increase of about 10%. Production is currently running at 7,100 ft. per hour.

"Instead of figuring a log from the outside in, then



Nice logs go through MDI metal detector.

turning the log and sawing from the outside, you're working your entire solution from the inside out," the manager says of the new optimization. "The software is pretty complex and that can be an issue, but one of the things that it gives you is a lot of flexibility."

It takes time to tweak optimization programs on any given application to get the right settings and parameters. Wilson III reports the learning curve on the headrig update has been shorter than previous optimization upgrades.

He credits that to the depth of experience he has throughout the mill. For example, relief sawyer Ed McLaughlin was a mill foreman for 35 years and now is semi-retired. Three days a week, he relieves the head sawyer, Chris Sawyer, who came on board about three years ago. Either Wilson or Willie Godfrey, production supervisor and 30 year vet, fill in the other two days.

Other key veterans include sawmill manager Cecil Richardson and millwright Carroll Perry, both on board since 1987; Earl Lindsey, yard and planer mill supervisor with 30 years; William Henry Norman Jr., planer mill supervisor, 20 years; and head sawfiler James Downs, 19 years. Patricia Mitzke joined the company as a secretary 18 years ago and now handles all hardwood and cypress sales. Her husband, John Mitzke, leads in log procurement. Other office support staff includes Nanette Edwards and Kelly Belangia.

Mackeys Ferry Sawmill operates a single shift and employs 70 workers.

## The Process

Two Volvo 120 wheel loaders unload trucks and feed the mill. Scalers use a hand-held computer to input scaling data and later download to the Sawmill Manager bookkeeping system. A Hood knuckleboom loader sorts and piles logs on the yard.



Downstream processing is undergoing an upgrade.

Mill infeed includes a Beloit 38 in. ring debarker and MDI metal detector. Headrig is a 48 in. McDonough carriage and 6 ft. bandmill, installed in 1995. Headrig saw kerf is .150 inch.

"We're sawing for grade at the resaw, so basically what we want to do at the headrig is put this big center block in these larger logs and then fill it with one inch boards on either axis," Wilson explains. "So we're saving some solution time by not telling (the optimizer) to fill out these outside chunks. Instead of a one-second solution you get a half-second solution. And we know we're sawing from the inside out, the resaw operator will be looking at the best grade."

Typically the sawyer will saw a round back and a double or multiple on two sides plus an 8 x 12 in. center cant, which go to a 5 ft. Prescott resaw with a McDonough linebar attachment. Saw kerf is .130 in.

Plans call for this machine center to be replaced later this year. Jones purchased a used Salem 7 ft. linebar resaw system from a sawmill in Alcolu, SC and is in the process of refurbishing it. The installation will eliminate one position and put the resaw operator in a safer, quieter cab-enclosed environment.

Boards go to the USNR three-saw edger, which is equipped with a reman chipping head. Edger kerf size is .160 in. USNR supplies TruFlo disposable chipper knives.

## Green/Dry Sorter

Green lumber goes on lugs at the lower or primary deck of the USNR/HEMCO green/dry trimmer and sorter line. Line speed is set to leave empty lugs between each board, which will be filled with dry lumber from the secondary upper deck when the two decks converge at the top of the incline. An unstacker feeds the upper deck where boards advance to a slanted grading table prior to merging with the green line.

The system's PLC keeps track of which lugs are green and which are dry. It talks back and forth between a Lucidyne grademark reader and USNR/Applied Theory scanner to determine which parameters the optimizer



Dried lumber en route to the planer mill.

needs to use to make its solution sets. The company has also written PLC codes that provide for the assimilation of a mix of customer specified grades, lengths, widths and/or thicknesses in a single bin.

Boards flow through the grademark reader, optimizer and into one of two in-line 20 ft. trimmers—one designated for green and one for dry lumber. Jones opted to go with two back-to-back trimmers rather than using a flying saw and fence that would adjust for the size differences between green and dry boards. Saws in the green trimmer are laddered at 1 ft. increments up to 20 ft., while the dry trimmer only goes to 16 ft., the maximum finished length.

The Jones considered three types of sorter feeds and selected a pusher lug over a drag chain because of concerns about the chain marking the lumber. In retrospect, Wilson III says the control benefits of the drag chain probably outweighed those concerns.

The 50-bin sorter is installed on the lower deck because of space limitations. Boards are loaded on top of the sorter, travel to the end and make a U-turn at the head-shaft to be loaded into the bins. Bins unload to a USNR/Lunden stacker.

Three USNR/Irvington Moore kilns have a total capacity of 190MMBF per charge.

Planer mill features a Yates American A2012 with top and bottom profiling knives and a 54 in. Yates American resaw used to make beveled cypress boards and resaw face cypress.

According to the son, future plans here will probably focus on the planer mill and may include installation of a second resaw or possibly a trimmer and package maker.

Looking to the future and the path he would like to pursue, he observes, "You've got to have a lot of flexibility in our industry today. You have to be able to contract when business contracts and expand easily when you need to. I think if we can stay at the relative size we are now, we can maintain some flexibility while also focusing on our efficiencies." He pauses a moment, then adds, "Just growing for the sake of growing isn't always the best answer." SL