



WOOD CASTLE FURNITURE

*“fine people making fine furniture”
– since 1978 –*

Times

Summer 2005

Volume IV: No. 3

Beyond the Sawdust...

Ron Loe: President



Cold War? Watching Butterflies in China

A popular version of Chaos Theory says the beating wings of a butterfly in China can affect the jet stream above, which can change the weather here in America. Hold this thought for a moment ...

China's ascendancy — economic and military — should give us all pause. Chinese capitalism, flavored as it is by the legacy of Maoism, is poised to position itself soon as the world's second biggest economic power. Expansion in 2005, while slowing from its recent dizzying rates, will still be north of 8%.

Multiple hundreds of long supply chains connect the world's economies to China's. Increasing numbers of manufacturers set up there, hungry for favorable labor and regulatory costs. Inputs of oil, iron and even wood for furniture fuel this expansion.

The outputs fill container ships that parade to our (and others') shores. "Cheap" and "plentiful" products fill retail shelves. Consumers are in a feeding frenzy.

Quietly, though no less significantly, China grows militarily. Their steady buildup (see Robert Kaplan article in June Atlantic Monthly) will challenge our hegemony in and around the Pacific. Stealth submarines and long-range missiles are in development.

The tealeaves tell me that a new, if different, Cold War is upon us. The Berlin Wall may be the dust of history, but a new challenge to our (and the world's) economic well being is roaring — like a Chinese tiger.

Unlike the Soviet era, it won't take much to upset the fragile supply relationships we have with China. One scenario: currency readjustment — the yuan disconnecting from the dollar, for example. All of a sudden, Chinese goods are more expensive to import. Demand drops. Container ships sit high in the water, empty.

Here's another scenario: North Korea (or Iran) starts playing with nuclear matches and an "incident" occurs. China rattles its sabers, we mobilize, ... and hopefully no more than supply chains break.

Another what-if: as China (and India) consumer appetites grow, natural resource shortages may trigger tariffs or other conflicts. Again, supply chains will suffer.

So, one must ponder: just how strong are our supply chains to China and other offshore outposts? With over half of all wood furniture now coming to us from elsewhere, what will be the effect on your business, on your competitor and on our economy when major supply chains break, even for as little as a few months?

If we're lucky, the consequences will be manageable ...

Depending, of course, on the weather, the jet stream, and the butterflies.

Optimizing **YIELD**

Ripping and chopping raw lumber is not exactly the glamour end of the wood furniture business. But coaxing the best yield from naturally varying wood is a significant — and daily — challenge. Important consequences are at stake for downstream factory processes and, ultimately, our customers. Optimizing yield directly translates into controlling quality and costs.

Wood Castle's recent installation of a Paul "14" chop saw proved to be a leap forward in Millwork (once known as Rough End) production, where the manufacturing process begins. Like our Parts Production PushCut CX (another Paul saw described a year ago in this newsletter), this new Paul chop saw sees and cuts out defects marked by a special crayon. But there's more. Much more.

The Paul "14" is enormously productive, accurate and safe. It easily out-produces up to fivev people working at individual chop saws. It features plus-or-minus one-sixteenth-inch accuracy. And the saw's no-hands-near-blades safety builds in incalculable future productivity.

Like the PushCut CX, the Paul "14" is programmed to "know" how many lengths it needs of different widths. It adjusts its chopping as it cuts for the best yield and least fall off relative to the input specifications for the package.



The in-line floor placement of the new saw opened the exciting opportunity to parlay the chop saw's benefits through process integration with our computer-aided ripping saw. Until now, ripped widths were stacked and inventoried, a costly process in floor space requirements and management as well as manpower to load and unload. Now ripping and chopping happen simultaneously, eliminating laborious intermediate hand stacking and freeing up valuable floor space.

An added benefit of the integration of ripping and chopping processes is real-time information flow. Before, ripping required guessing final chop saw yield in order to determine how much to rip to cover that yield. Now, yield and quantity are known real-time during the ripping and chopping process. Costly unscheduled make-up ripping as well as over-ripping are eliminated.

Our improved millwork made room for another important change. A totally redesigned fall-off (waste) wood conveyor has been installed. This conveyor serves the rip and both Paul chop saws. It eliminates most of our 2-yard red waste bins, which heretofore required frequent emptying via forklift to a Dumpster.

Optimizing yield may not be glamorous or photogenic. But what is pretty is increased efficiency. Every day.

Graphic above depicts Wood Castle's newly integrated ripping and chopping Millwork process. **1)** Millwork lead, Cliff Smith (see *Team Wood Castle*), feeds raw lumber into rip saw. **2)** Rip and chop saw form a 100-foot-long Millwork production line. **3)** Ripped widths are guided from conveyor to chop saw staging. **4)** Crayon-marked for defects, ripped widths are inserted into Paul "14" chop saw. Fall-off conveyor bin and belt system move waste to exterior hog system. **5)** Roll-around Paul "14" controller module is programmed for a package's millwork requirements. **6)** Various chopped lengths are sorted at the end of Millwork line, ready for glueing and other processes.



Team WOOD CASTLE

Cliff Smith
Home. Again.
I'm Dad first

Born in 1968, in La Grande, Oregon, Cliff Smith knows – again! – the wonders of Oregon. And the deep importance of family.

As department lead in Millwork (also known as Rough End), Cliff manages a team responsible for ripping and chopping raw lumber into specified widths and lengths necessary for panels and other parts. Recent innovations and upgrades in Millwork (see *To build the best panel* and *Optimizing Yield*) require team-building talent and deep production experience. Cliff Smith is deeply qualified.

A star athlete in all major sports, Cliff graduated from La Pine High School in central Oregon in 1986. He then joined the Navy and toured the Mediterranean and Atlantic, working on a crack flight deck firefighting team on a new carrier.

Out of the military, Cliff began a fast career in steel, which moved first him, and later his new family, to different companies and facilities around the country. A quick study, Cliff rose rapidly in responsibility.

“At Birmingham [Steel] I was their youngest ‘melt shop’ superintendent in the U.S.,” Cliff said proudly. He was 31.

In '99 he and his young family landed in Southern California. It was not a soft landing.

He and his wife separated, and she took the kids to Oregon. In 2001 Cliff switched careers, first to fresh-water well drilling, and then to operating heavy-equipment.

“I drove these huge graders, the kind that prep large commercial and industrial sites,” he said. “The pay was good, but the long commutes weren’t,” he added.

In spite of heavy demands of his job, Cliff regularly drove or flew to visit his young sons, now living in Scio, Ore., not far from Wood Castle. He was concerned that they needed him.

“I’m a dad first,” Cliff explained. “Everything else is secondary.” Determined and committed, Cliff brought his boys back down to live with him in the L.A. area. To keep close tabs on them, he bought cell phones and called them often during the day. “You wouldn’t believe how often I maxed my minutes,” he said.

Even at their apartment, he worried about their welfare. “I bought Walkie-Talkies so even when they rode their bikes around the block I could talk to them.”

But Southern California proved too daunting. “The gangs, [police] helicopters, drugs, the cost of living, smog ... I’d had enough,” he said.

In a radical move, the boys and Dad moved back to Scio, Oregon, on May 11, 2004. Six days later, Cliff began work at Wood Castle Furniture.

“Best move I ever made,” Cliff says. “The quality of life here is a much higher value than the big bucks you can make in L.A.,” Cliff said. “I used to fish and bow hunt as a kid. So, now my kids can learn and enjoy those things, too. We’re a couple blocks from Thomas Creek, where they swim and play and explore.”

The environment is better now in another way: the boys’ maternal grandmother, whom Cliff has known since his own childhood, lives nearby and watches over him and the boys. “Oregon: It just feels like home,” Cliff said.

A much happier man now, Cliff has lost none of his energy and drive. He is keen on productivity and teamwork. “I love the constant challenge of increasing our lumber yield and improving our labor efficiency,” he said.

“I’m glad to be at Wood Castle. And to be home. Again.”



To build the best panel ...

Once Millwork has produced widths and lengths, (see *Optimizing Yield*) panel production for a collection’s fronts, tops and sides begins. ¶ Wood Castle’s factory boasts two “cold-clamp” glue wheel machines, near the Millwork rip and chop production line. ¶ The glueing process begins with sorting panel staves (chopped lengths) for color and grain. Next, the staves pass via a conveyor across a glue roller. ¶ An operator builds one or more panels by stacking the staves on a special clamp, which draws and holds the staves together under pressure in a tight composite block (**top photo**). When full, the operator rotates the clamp out of the way, then begins the process anew on an empty clamp. Each machine has a total of 14 clamps arranged much like the paddles of a sternwheeler river boat. ¶ A hard-rubber mallet is used to hammer the staves flush (**left**). ¶ After drying for about an hour and a half, the panels are fed through Wood Castle’s custom-designed A.E.M. molder (**lower right**), which planes and rough-sands them to a specified thickness. ¶ ¶ A finished cold-processed panel is very stout; if it breaks, it will break along grain lines before it ever fails on a glue seam. Wood Castle’s glued panel failure rate is virtually zero. This contrasts with other manufacturers using a microwave glue-drying process, which, while faster, suffers a failure rate of approximately three percent.

What the heck is it?

Here’s a fun test of your familiarity with Wood Castle and its manufacturing process. Look carefully at the photograph nearby and guess what is depicted. The first reader to guess correctly will receive a 50%-off-wholesale discount coupon redeemable on any item we offer in our retail collections.



Here’s a hint: Each can move you. Need another hint? Go ask someone in your warehouse.

Here’s the fine print: Only employees of authorized dealers and vendors of Wood Castle Furniture are eligible to participate. One entry per person. In the event of a tie, winner will be randomly selected. Send your entry by US postal mail only (faxes, e-mails and telephone entries will not be accepted) to: Wood Castle Contest; 29855 Hwy 34, Albany OR 97321. Please legibly print your name and a telephone number at which you may be contacted. Contest award is not redeemable for cash.

The Wood Castle Times
is published quarterly.
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