

NEWS & INFO FOR
BOAT BUILDERS
CONTRACTORS
WOODWORKERS

BIRDSEYE VIEW

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MAKING SENSE OF MARINE PLYWOOD CHOICES

The many options and price points available to fulfill a wide range of marine applications make it important to understand the trade-offs.

Choices can range from the top of the line European Okoume marine in certified or non-certified, to the marine Meranti panels, or domestic Douglas Fir. These options and price points are available to fulfill a wide range of marine applications.

Its well known and often specified in trade journals and magazines such as *WoodenBoat* magazine and *Professional Boatbuilder*, that European Okoume marine plywood is the best choice of plywood for boat construction due to the fact that Okoume offers a great amount of durability without adding too much weight.

This is always that trade off with any marine plywood. Durability usually means, high density. For this reason, Okoume, Sapelle, Douglas Fir, and some specific types of Shorea (Red Meranti for example) are most commonly used in boat building. All of these species offer durability without adding excessive weight. These species peel exceptionally well as the

trees are typically quite large in diameter -- a key factor in producing both core & face veneer that are free from knots or voids.

Marine plywood such as Hydrotek, produced to European standards, offer more ply's, and are uniform in specie throughout the panel (Red Meranti). These panels are less expensive than the European Okoume marine plywood, and they offer a greater durability and hardness than Okoume panels, however they are always heavier than Okoume panels, and typically not produced to the same quality standards. All of these panels we are discussing are produced with a Phenolic glue line, which is a water-proof glue.

Sapele marine plywood is not as commonly available in the US market as the cost of a sheet of Sapele is almost double that of Okoume plywood. However, Sapele offers a much harder face veneer than the

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THINK DIFFERENTLY

When you're finished changing, you're finished. - Benjamin Franklin

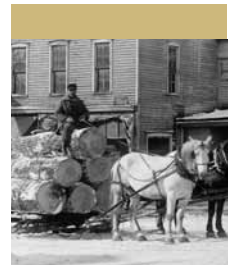
A year ago we published our first edition of this newsletter. I recall an early comment expressing concern for being able to find enough topics to report on each time. Today, I am even more certain this fear is unfounded. Our industry has seen unprecedented change and appears to not be slowing down anytime soon.

Change is inherent to our society, it always has been. But recently the rate with which change occurs has escalated to an amazing level. Changes today do not happen gradually as we have experienced in past generations. Change leaps upon us. Those who ignore it get left behind.

Many of us at some point have been resistant to change. But it's becoming more and more crucial to embrace it. Today businesses are making decisions whether to continue employing an individual who has years of valuable experience and train them on computerized systems or to hire someone with computerized system training and teach them the business. Those with system and industry experience are keeping their jobs longer. Those with either system or industry experience demonstrating a hunger for learning are second in line. Those without a hunger for learning will find themselves hungry.

As all of us here at LLJ spend 2009, our centennial year, looking back -- we find that change has been an integral part of our company's history. It has always been our goal to bridge the gap between good quality hardwood resources and our customers while demonstrating an insatiable hunger for learning new technologies and your business. We'd love to hear about the latest change you have decided to embrace. ■

Mark Johnson



Looking back, we find that change has been an integral part of our company's history.

INDUSTRY NEWS

GET THE QUALITY OF LUMBER YOU EXPECT



The National Hardwood Lumber Association (NHLA), established in 1898, has developed, and continues to refine, definitions of hardwood lumber quality and proper measurement techniques.

Just as people, and even brothers in the same family, have their physical differences -- trees do also. Products harvested from them have like characteristics but also have their own unique signatures. Trees grow conically. Each year a new cone of material forms over the last, producing a new growth ring. The limbs of a seedling, or young tree, do not grow up the tree but either become larger or fall off and eventually become completely covered by the new growth of the tree. Because of this, when milling a log, the highest quality comes from the outside of the log with the lowest quality coming from the inner most portion.

How do we qualify or value these fluctuating volumes and qualities? NHLA lumber grades are based upon the percentage of clear face cuttings present in each board along with the varying qualities and sizes within each grade. The NHLA recognizes several grades -- the highest

quality is called FAS (Firsts and Seconds), then FAS One Face, Selects, #1 Common, #2 Common, #3a Common, and #3b Common. While these are the standard grades, there are more specialized grades to define items such as worm holes in Soft Maple (WHAD, Worm Holes Are a Defect and WHND, Worm Holes Not a Defect).

There are about 7% of NHLA members nationwide who are grade certified. L.L. Johnson Lumber Mfg. Co., and Johnson's Workbench are one of three members grade certified in Michigan.

In pulling lumber for a large volume order, sometimes an inspector encounters a board falling on the border line between five board feet and six. They will round up on the first borderline board and down on the next. When evaluating the board's quality, they utilize the same rounding technique.

When selling, or buying, only one board, the variance of grade and volume must be narrowed, especially when high unit values are encountered. Rounding to the nearest board foot on \$15.00 per board foot lumber creates problems. Wide clear boards in a package of hardwood lumber brings a higher unit price than the narrow lower quality pieces but together average to a unit price somewhere in between. Color and grain pattern must also be taken into consideration with some species such as Cherry and Quarter-sawn Oak. All heart, all red, Cherry commands a higher price than sappy. Quarter Sawn Oak, or highly figured, dictates a higher price than Rift Sawn, or lightly figured.

Not all lumber yards will sort to a customer's specific requirements. Those that do, such as LLJ, will do so for a nominal charge. Because each log yields high and low grade products, evaluation and sorting must take place to supply customers with specific products suitable for their projects.

Custom evaluation and sorting carry a price so each woodworker needs to find their place in the process. Woodworkers familiar with grades and species may make informed decisions saving both time and money. In addition, as woodworkers expand their product offerings, they may use the lower value pieces in a lumber package for cabinet styles, drawer faces, and panel glue ups. Buying larger packages of lumber, rather than sorted specific items, requires less labor and expense and typically saves the purchaser money. On the other hand, if a woodworker does not have the storage space nor product line diversity to handle packages of unsorted lumber, they are better off paying for sorting. ■

-- Contributed by Mark Johnson

Woodworkers familiar with grades and species may make informed decisions saving both time and money.

NHLA HARDWOOD GRADING STANDARDS

GRADE:	Firsts and Seconds (FAS)	Selects (Face side is FAS, back side is No. 1 Common)	No. 1 Common ("shop"grade)
MINIMUM SIZE:	6" wide +, 8' long +.	4" wide +, 6' long +.	3" wide +, 4' long +.
MINIMUM CLEAR CUT:	83-1/3% of clear face cuttings.	83-1/3% clear face cuttings.	66-2/3 % clear face cuttings.
MINIMUM CUTTING:	4"x5', or 3"x7'.	4"x5', or 3"x7'.	4"x2', or 3"x3'.
BEST USES:	fine furniture, cabinetwork...	Lower cost alternate for FAS if one good face is needed	A good value when relatively small pieces can be used.

Marine Plywood (Cont'd)

Okoume plywood, which while durable, is considered soft.

Boat builders in the United States are requesting more and more that their plywood be made to the British Standard 1088 (BS1088) or British Standard 6566 (BS6566) known to be the toughest standards for plywood manufacturing.

The key point of this British Standard 1088, is that no core gaps greater than 0.3mm are allowed. Other, key points of the standard are the thickness of the face veneers -- they must be at least 1.0mm after sanding. Face thickness is always the most costly part of plywood manufacturing (as the nicest veneers are used for faces), and the BS1088 standard insures that your plywood will have a full thickness face. The British Standard 6566, is not as common as the BS1088 standard, both here and in Europe. However, as the BS6566 standard is still more stringent than the American PS-1-95 standard for marine Fir plywood, some companies do still offer this grade.

In addition to BS1088 standard, you will also find that some marine plywood manufacturers offer a "Lloyds" certified BS1088 panel. The Lloyd's Register Group is a maritime classification society and independent risk management organization providing risk assessment and mitigation services and management systems certification.

Historically, as Lloyd's Register of Shipping, it was a specifically maritime organization. In the late 20th century it diversified into other sectors, including oil & gas, process industries, nuclear and rail. Today, only about one half of imported marine grade Okoume plywood carries the Lloyds certification. Marine plywood mills that are certified by Lloyds, pay a fee in excess of \$10,000 to have inspectors from Lloyds visit their manufacturing facility on a regular basis and test current production to ensure that it meets the British Standard 1088.

Some mills will produce marine plywood that is Lloyds certified, and some mills will produce a panel that is "made in accordance with" the Lloyds standard. The British Stan-

dard 6566 is not currently certified by Lloyds, however, it is still used as a guideline by some marine plywood manufacturers.

One thing to note about Okoume plywood is that, as previously mentioned, the marine grade quality is almost exclusively produced in Europe. Within the last five years or so, China has begun to utilize the Okoume logs for face veneers and they are laminated to the Poplar core that's grown extensively throughout China. The Okoume logs themselves come from Gabon in central Africa. This product may go by the name of "Okoume" plywood, but it's nothing like the Okoume produced in Europe. Typically, you will find only the face veneer is made from Okoume, and its peeled at thickness' of 0.3mm or 0.5mm.

The type of glue most commonly used in China is interior (Urea) glue and its almost always laminated to a Poplar core. Panels of this quality have in some ways ruined the reputation for Okoume, but this is quite a different product to the marine grade panels we've discussed here. ■

— Contributed by Luke Wolstenholme, of Wolstenholme International.

Wolstenholme International is one of the Country's leading importers of hardwood plywood products from Russia, Europe, China, and South America

EMPLOYEE PROFILE

Brian McIntyre is our first shift Yard Foreman. Twenty-nine years ago he was hired by Ted Johnson as a Boiler Operator. The two boilers we still operate today are horizontal return fire-tube boilers. They are quite rare. Our annual inspector comments there are none left like these he is aware of. Brian ran the boilers back when all we had were manual adjustments for fuel feed, firebox air, and draft controls. It was a much more physical job than today but still takes considerable training and skill to operate.

Our Boiler Operators also have security and janitorial responsibilities of which Brian approached those tasks with his trademark refreshing attitude, "that's no big deal, I can do that, no problem!". He moved on from boiler duties to the lum-



ber yard driving one of our 20,000 pound capacity forklifts responsible for loading outgoing lumber trucks, unloading incoming lumber trucks, loading and unloading our dry kilns....the list goes on and on. As

our first shift Yard Foreman, Brian is responsible for everything going on outside of our Charlotte Office. His job is very demanding and requires him to shift gears daily, stay aware of the truck loads of lumber arriving, all the lumber orders being pulled and machined for shipment, not to mention keeping our Yard and Shop staff productive. Brian is on call 24/7 but finds ways to make sure things get done even in his absence.

Brian and his Wife, Teresa, live near Bellevue, Michigan where they raised two sons and a daughter who make it back home to visit occasionally. Brian enjoys tinkering with his tractors, attending farm auctions, and fishing. It's been a pleasure "growing up" with Brian at LLJ. I'm glad he's on the journey with us. ■

— Contributed by Mark Johnson

Brian is responsible for everything going on outside of our Charlotte Office.

No. 2A & 2B Common

3" wide +, 4' long +.

50 % clear face cuttings.

3"X2'.

Suitable for some paneling and flooring applications.

Sound Wormy

Same requirements as #1

Common and better but with wormholes, limited sound

knots and other imperfections allowed. Not commonly available.

No. 3A Common

3" wide +, 4' long +.

33-1/3% clear face cuttings.

3" wide + by 2' long +.

Economical choice for crates, palettes, fencing, etc.

No. 3B Common

3" wide +, 4' long +

25 % clear face cuttings

1-1/2" wide + by 2' long +.

Economical choice for crates, palettes, fencing, etc.

L.L. Johnson Lumber Mfg. Co. & Johnson's Workbench

563 N. Cochran Ave.
Charlotte, MI 48813

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Charlotte, MI 48813
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Fax: 517-543-7180



**Johnson's Workbench
South Bend**

51315 Indiana 933 North
South Bend, IN 46673
Phone: 574-277-8350
Fax: 574-272-8798



**Johnson's Workbench
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1038 Burton SW
Grand Rapids, MI 49509
Phone: 616-245-9545
Fax: 616-245-9546

CUSTOMER SPOTLIGHT

EASLING CONSTRUCTION

Easling Construction is a northern Michigan General Contractor that has been in business since 1975 and has grown to a staff of nearly 100 employees.

After graduating from Michigan Technological University, Marty Easling put his Civil Engineering degree to work and started Easling Construction Company in 1975. Thirty-four years later, with the help of many talented employees, Easling Construction Company has grown to be a leading residential and commercial builder in Leelanau County, Michigan.

Using his trademark "hands-on approach," Marty oversees daily operations by visiting his company's construction sites every day. Each visit is a new experience, Marty will tell you, and each day adds more knowledge that he and his employees use to handle numerous situations that typically develop when building a customer's home.

Easling Construction takes a comprehensive role in building each new



Photo by Peter Tata

structure. Marty and his staff take responsibility for performing all of the essential functions, from design, original masonry work, framing, finish carpentry and cabinetry, roofing, hanging and finishing drywall, ceramic tile, stone work, and cabinetry to final painting.

Although most of the cabinetry is built on the job site, the company's impressive 5,500 square foot wood shop, with three full time employees, provides all of the cabinet and interior doors, molding and trim, and decorative accessories required for each project. With this measure of involvement, Marty and his staff ensure that each project proceeds smoothly toward completion.

Easling Construction Company has become one of the largest contractors of fine custom homes in northern Michigan. From a small bathroom remodel to building a 14,000 square foot home, the company is up to the task. Though their work is impressive in its own right, Marty and his dedicated staff truly recognize that through a "hands-on approach," you learn the most about your business to best deliver your customer's dreams. ■

-- Contributed by Earl Breen