PRO SHOP

with LOUIS IRION

Take the time and effort to acclimate your lumber

Wood, for all its utility, beauty and workability, has some definite idiosyncrasies and issues, and gaining an understanding of said issues will make your woodworking experiences a lot more positive. All wood by its nature is hydroscopic, a fancy word for the fact that wood will continue to give off and take in moisture to reach an equilibrium with its immediate environment. When it is in a damper environment wood will swell, and in a drier environment it will shrink. You may notice this with your own wooden doors and drawers that closed all winter will expand and stick with the summer humidity, only to retreat come next winter. No matter how long a piece of furniture or millwork has been in existence, it will continue to adapt to its current environment.

The most obvious experience I have encountered of this phenomenon was repairing and restoring period furniture. The best example is probably the antique furniture that was imported from England to furnish American homes. Our shop was constantly taking care of this furniture, which would split, shed moldings, veneers and applied parts with a vengeance. It didn't help matters that the bulk of the furniture was thick mahogany veneers applied to roughly 1/2"-thick oak, and that oak had its decidedly own idea of where it wanted to be. We wondered how furniture that had stayed intact for sometimes hundreds of years could suddenly start to implode, and it took a while to figure out the reason why. The main culprit was the changed environment from the damper English climate and lack of central heating and air conditioning in homes there to homes in the U.S. with central heat and often super dry conditions.

There is also a myth that all lumber you receive is fresh out of the kiln like a baker's bread, and that is hardly the case. I spent a lot of time on the grading stations at a few large lumber distributors and I was amazed at the warehouses chock full of lumber stacked 20′ high and many rows deep. I often wondered how long some of the lumber sat in the back rows of their giant sheds before being distributed. Specialty lumber dealers like ourselves inventory lumber in closed sheds that sit there until the right customer comes along, and sometimes that can be years. The lumber is kiln dried and the core reflects that, but the surface can pick up some moisture and the possibility always needs to be considered.

Let it adjust

The key to minimizing the variation in your lumber is to properly condition or acclimate it in the shop. This definitely takes some time and some planning, and it may not be practical for larger production shops, but any chance you have to give the wood some time to adjust before starting to machine it will lessen your problems. Wooden floor installers are well aware of this need and will often insist on stacking the flooring in a heated room onsite with space to breathe and move a bit before installation. I know, one more step in the process, but the alternative is along the lines like of an ounce of prevention is worth a pound of cure.

I want to share knowledge that I had to learn the hard way, and there were some painful lessons. I ran a custom furniture shop for 20 odd years and we specialized in matching the lumber in each piece, especially the panels, drawer fronts, and if a slant front desk, a matching lid. The biggest problem we encountered was with the doors on pieces, which could twist due to a balky panel or obstinate rails and stiles. Drawer fronts could warp or bow, but they were less of an issue. The call would come and we would go to the scene of the crime, assess the damage and generally come away with a delinquent part, sometimes with the whole piece. It was a real pain to remake a door, match the wood and finish and remount it. If a matching panel was the culprit, we had to figure a way to skin the panel and apply it on similar substrate to maintain that match. By the time we retraced all our steps, most if not all the profit

from the piece was lost. Even worse, the customer knew that the piece had been repaired and often felt that the repair somehow compromised the piece, which it probably did. It's a lot like a repaired dent on a car. You know where it was and your eye naturally goes to that spot to see if you can still detect it, and that is just human nature.

After a few too many trips down that road it was obvious we had to account more for the lumber movement. It started with rough ripping all the rails and stiles for the doors ahead of them being milled and worked, and as our awareness increased, we went to roughing out drawer fronts and panels at the beginning of the project while starting construction on the case. The cases were much less of a problem, because proper construction takes in some consideration for movement in the piece, and when put together the bottom and top help to hold the sides straight. Over time we tried to even give the case sides time to acclimate because it was worth it to avoid any type of problem.

What we often don't realize about lumber is that only at the time of construction is it finally free to move and assume the position that its structure intended. If you think about the lumber, it is stickered in layers shortly after being sawn, with layer piled on layer throughout the drying process. Once sorted and graded it is put into packs, banded and placed in storage with other packs on top until needed. This process helps keep the lumber flat, but also keeps it from moving to its comfortable place. This is why acclimating the lumber is important, that the lumber be allowed to assume its position free of any constraints, with hopefully enough material left to mill it and still achieve the desired thickness. If for some reason the lumber moves too far, it's telling you how lucky you are that you didn't just run it through the planer and start to work it. We called that dodging a bullet.

The biggest problem we encountered was when ripping multiple pieces out of a wider board in situations like producing molding stock and rails and stiles for doors. Now you have to deal with the dynamic of tension in the board itself when you release those individual pieces. There is by its very nature often tension in each board, as there is variation between the plain, rift and even quarter sawn areas in the board, tension from the way it grew or the way it was dried. For whatever reason, you still have to account for that movement. We would rough rip our rails and stiles and keep them as wide as the multiple cuts from the board would allow, and that was our margin for potential movement before the lumber underwent its final milling. This doesn't have to be a long-term process, although the more time the better, of course. We found that the wood moved pretty quickly if inclined to do so, and that a week or so was enough time for it to settle into its new configuration.

Worth the effort

Over time we did develop different strategies to acclimate the lumber. Rails and stiles, drawer fronts and panels were generally leaned against a vacant wall with exposure to all the surfaces. If you are working on concrete, it is necessary to put a barrier like a piece of wood down first to keep the lumber from wicking moisture from the floor. For larger jobs we used lumber carts, stacking the wood with a few spacers cut from waste wood to allow the wood to breath and move about. The carts gave us the advantage of being able to move the wood to a less trafficked area and then move it to the machining area when we were ready to start milling it. We would often make a rudimentary lumber presses for wider pieces with spacers between the boards and bunks on the top and bottom that were

clamped together to allow the wood to breathe while holding it flat. How and where you acclimate the lumber depends on the size and spacing of your shop as well as finding the methods that work best for your operation, but I guarantee you that any effort you can make will make your shop life better.

Another rule of thumb is to not mill the lumber too far in advance, and to try to work with it as soon as possible after milling. Like case pieces that are tamed by their construction, the lumber in a door will be mortised into another piece that will help hold its position, a drawer will be stabilized by the sides being fastened to it and the door frame will hold a panel flat and help keep it from even getting started in a bad direction. I know a shop that routinely milled and installed the panels in their doors the same day, as they could cup overnight and make the task of fitting them much more difficult.

We didn't jump on this bandwagon. It was a gradual learning process. But as we saw our problems diminish it became a way of life in our shop. I would keep an eye on the cabinetmakers and the progress of the pieces, and wasn't the least bit afraid to inquire if they had their material roughed out and acclimating. I confess, I was the mild but insistent fanatic. They didn't always understand the importance, but when the customer called, I had to answer that call, and I hated those calls as much as any of the bad parts of the business. They were almost as bad as trying to get paid when the work was done and delivered.

The funny thing is that the importance of acclimating lumber is rarely discussed, and certainly not emphasized. We slowly figured it out, but it was nothing that was ever pointed out to us. I have seen occasional casual mentions of it, but have never seen it clearly stressed, as important as it is. It should be part of the curriculum of Woodworking 101.

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IWF SAYS THE SHOW WILL GO ON

The International Woodworking Fair is proceeding as scheduled on Aug. 25-28 at the Georgia World Congress Center in Atlanta.

"IWF 2020 is growing, on track and on plan for opening day Tuesday, August 25," the IWF announced on its website. "With the largest footprint in show history, attendee registration pacing well ahead of 2018, demand for exhibit space expanding and all-new branding powering the marketing push, IWF 2020 is set to deliver another winner.

"At the same time, we know that many are concerned about the COVID-19 Coronavirus and its potential to impact IWF Atlanta 2020 this August. As we proceed on course to produce the show as scheduled, we're closely monitoring developments related to the COVID-19 Coronavirus in line with local and national authorities and public health advice from the CDC and WHO. We are prepared to address any significant changes as the year progresses. Meanwhile, it is business as usual at IWF."

For updates, visit www.iwfatlanta.com.

DEADLINE EXTENDED FOR IWF CHALLENGERS AWARD ENTRIES

The International Woodworking Fair has extended the deadline for the 2020 Challengers Award to April 24.

"We have received calls from exhibitors requesting a deadline extension to submit Challengers Award entries," JP Roberts, IWF's director of sales, said in a statement. "To accommodate IWF exhibitors the judging panel has agreed to a compressed evaluation time, so that the deadline can now be extended from April 1st to April 24th."

For more, visit www.iwfatlanta.com.