

## Building Smarter Blanks, Part II

*Text & Photos by Bob Maulucci*

Last issue, we went from raw bamboo to 24 or so strips, each perfectly square in cross section. This was accomplished using the band saw and Medved style beveller as seen last time. The real advantage to this system is that now we can easily plow through the next few rod making steps with the repeatability and ease of set up that equal strips allows us to have.

Our strips are square, but they still have the remnants of the nodes intact, and these need to be removed before we can go through the rough beveling process. The quickest way to accomplish this is to return to the belt/disc sander combo. But before we address the nodes, let's take a moment to discuss some simple shop safety.

I use my belt sander so frequently that I went out and bought a second dust collector that remains attached to it 90% of the time. The other dust collector sits on the far side of the shop where it handles duties on the saws and the bevellers. I highly recommend the use of a good dust collection system in tandem with work gloves, ear protection, and a good filter mask. I never work in the shop without employing these precautions, and I have made it very clear to my family that they should not sneak up on me when I am operating machinery and wearing the ear protection! We have a system worked out where one side of the basement's lights can be flicked on and off from the top of the stairs without affecting the tools or lights on my side. Until I call up to them, no one comes down the stairs and into the shop when machines are running. No exceptions. Furthermore, all machines are unplugged the moment that they are done being used. Believe me, the big red "ON" switch on the table saw or other machine is a magnet for toddlers. I feel safe knowing that the saw is never left plugged in, and the blade is always lowered be-

low the table's surface. All safety shields are kept in place, 24/7. Another tip that I have adopted in the shop came from a recent woodworking magazine in which the author recommended putting 10 items away every time you enter the workshop. Every time I walk down into the basement shop, I try to remember to put away 10 items. A neat shop is a safe shop! Okay, enough about safety, let's get to work.

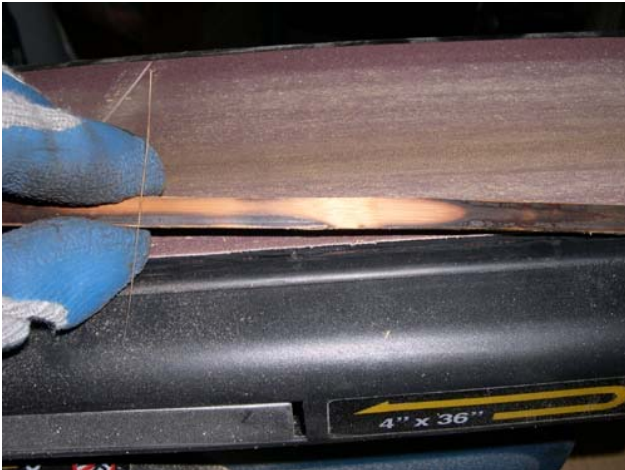
Using the belt sander, I can quickly take down the pith side of the nodes that remain from our first few processes. Using rubberized work gloves (mine are blue Atlas work gloves from Home Depot or MSC), I hold the node over the running belt and press the pith side down with my left hand. I continue down each strip to the middle, and then I flip the strip and work towards the middle to finish the strip off. The rubberized gloves not



only protect my hand, but they give me good control over the strip as I press the strip into the running belt. The running belt has a tendency to want to throw the strip if you do not have a good grasp of it. I only use the gloves for a few months to insure that the padded fingers and palms don't wear out. Afterwards they are good for my wife to garden with.

Remember, bamboo is sharp, and you are most likely to learn that after the cut has already started to bleed!

Before sanding the enamel side of the nodes, I inspect each strip to look for any wily kinks or bends at the nodes. It is a simple fact that some bamboo culms have more pronounced nodes than others. These nodes should be straightened and pressed accordingly using a heat gun and machinist's vice. My technique is very similar to that used by Tony Spezio and described in his article in *Power Fibers* #6, page 10. A notched vise makes short work of the nodes. I then take the bamboo and take a light pass on the enamel side to flatten the node,



pressing firmly for three seconds or so onto the running belt. Work your way through all of your strips.

Now that the pith side is rather flat from sanding, it is important to remove the enamel for rough planing. This allows the bamboo to rest firmly in the forms or to sit perfectly in your beveller or mill's in feed. This flatness is essential in achieving the perfect 60 degree angles for your strips, and it should not be overlooked. The enamel should be flat despite one's natural inclination to remove as little power fibers as possible.

I achieve this flatness using the belt sander,

once again implementing techniques found in Golden Witch Technologies video, *Roughing and Tapering Under Power*. I hold the strips in my right hand standing perpendicular to the belt sander. I lower the middle of the strip enamel side down onto the running belt, and I press down, sliding the strip from middle to end. I pull up on the strip and then work from middle to the other end. The running belt should have taken off nearly all the enamel and flattened the strip sufficiently for rough planing or milling. It does take some practice to



achieve this without taking too much off. One work around I have found is to use a 120 or 150 grit belt. This gives one more leeway before going too far into the power fibers. You cannot replace material once it is gone. Of course, if you prefer, you may use a block sander and do this work by hand. Some may scoff at this cruel treatment of the strips, but I guarantee that the results and the time savings are well worth it.

Next, it is time to cut your 6' strips to size. I like to use a spiral stagger mainly from my extensive work with quadrate rods, but a simple jig (see photo below) can accomplish this eas-



ily in the shop. Using a stair stepped rod board, the six strips are easily laid out and marked to length. In the photos, I am making a quadrate blank, but the same method is easily adapted to hexagonal rods. I use a white china marker to mark my cut points on each rod strip. I then



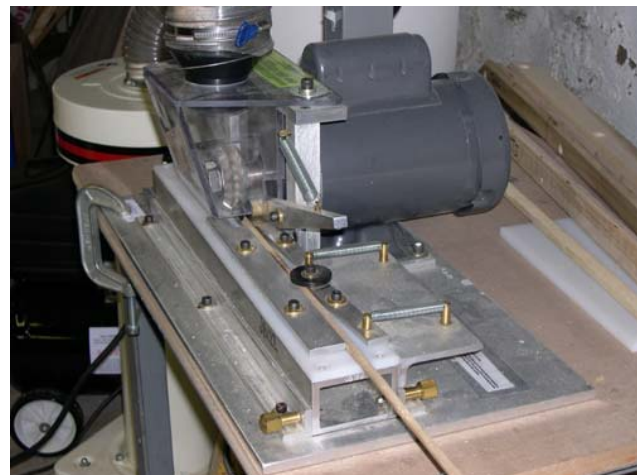
line up all the strips and cut to somewhere less than 5' in length. This allows me to use the 5' heat treating fixtures in my Reiter mica strip oven. Another nice thing about having 5' strips is that I can do many strips in a batch and the rod's eventual length will have no affect on my work. I can use these strips for rods of any

length I care to make, pending the proper depth of power fibers of course. Strips are cut on the band saw and marked black on the butts for butt strips and blue on the butt for tip strips. The enamel is marked with strip numbers with a series of slashes, pretty standard rod making stuff.

Whether using the Medved style beveller or the



Bellinger milling cutter based beveller (see



picture), I have strips of equal length and width. This makes setting up the initial cuts a breeze. Using the rubber work gloves, I can safely rough triangles into all my strips. If you use a hand plane and roughing form, the rubber glove on your off hand provides a good anchor for the strip. Even better, try a #4 bench plane. You will find this an effective way to make the

work go even faster. You will find that the flat enamel side will give you better results no matter which method you use to rough your strips.

From here, the last step is to heat treat your strips (see photo). I recommend the heat treating fixtures offered by Spavinaw Rods (see PF



#8). I bind with cotton glaze or Kevlar thread



and I heat to 350 degrees for 30 minutes before dropping the temp to 225 degrees for two hours. Whether flamed or not, my rods remain crisp and straight because of the heat treating regiment and the prep work that we have looked at up to this point. Good luck, and feel free to contact me at [bob@downandacross.com](mailto:bob@downandacross.com) for clarification on any of the techniques used above.