

Reverse Turning

At the June Utah Association of Woodturners meeting and picnic held at Craft Supplies, the featured demonstrator was Dale Nish. He demonstrated what he called “reverse turning”, a way to turn hollow forms that have bulbous bottoms and very thin necks. What follows is my interpretation of what he demonstrated.



First we mount out blank between centers. This happens to be a branch from a willow tree with the loose bark removed and cut to about 12” long.



Next we true up the blank and turn a tenon on both ends. If you like, at this time you can define your shape a bit with a pencil. For artistic purposes, the rule of thirds is a good place to start. This would mean that rather than half of the blank being bottom and the other half neck, it is better to devote one third to either part and the other third for then rest. You'll also have to account for about 2" on the bottom for defining the foot and making the plug I'll describe later.



After we've decided what to do, we rough out the shape. Leave the neck larger than you intend for the final because we'll need mass for the hollowing process of the bottom. Also note that there is a bit of tenon between the bottom of the vase and the tenon we'll be putting in the chuck later to turn the top.



Now that we have the rough form of our vase, mark the bottom and the tenon the plug will be made from with a line, unless there is some good figure in the wood to re align the piece later. This will help hide the plug because rings and figures will look more consistent when we put it all back together. Then part off the bottom tenon.



Now we start the hollowing. Note that I've left a little of the bottom tenon and did not hollow the opening all the way out. This can be done later but by leaving a little ring, we know we haven't made the hole bigger than the plug. We can trim the plug smaller easier than we can make the hole smaller.



Once we have the bottom hollowed to finished thickness, trim the bottom and use a straight edge to make sure that the bottom is very flat so we can get a very good bond with the plug.



Now remove the vase from the chuck and mount the bottom tenon that we parted off earlier. From here, we'll clean it up and trim it to fit.



By turning the plug with a little bit of a bevel to it, we can test the fit. Notice the burn mark from fitting the base. We know that this is the diameter we want to trim the rest of the plug to for a snug fit.



Now that we've trimmed the plug for a snug fit and cleaned up the tenon so it is square, we can apply our glue and put it together. Note that I've also preserved our alignment mark.



Now when we put it all back together, we use the tailstock to hold it all together while the glue dries. Note that the alignment mark is lined up on both sides so the rings on the end grain and any figure should match up as much as possible. We can leave this to dry overnight or give it about an hour, set this one aside and start another. We don't finish this until the next day or so, allowing the glue to fully dry. You can speed up things a bit using CA glues but you have less working time to align the marks.



Returning to the lathe the next day, re center the vase as best you can, remove the tenon from the top of the vase and further define the exterior shape. I've made a small dimple in the top to help align my boring tool.



I don't have a good drill bit that is long enough and my D bit is a little small so I just used my spindle gouge as if it were a D bit. It works fine and takes less time than setting up the drill bit and chuck in the tail stock. Just plunge the tool down the center about an inch, withdraw the shavings and repeat until you are through to the bottom hollow.. The earlier dimple is key here to start the tool down the center and you can proceed by hand from there.



Now that our hole is bored, finish hollowing out the bell, if you make one like this to finish thickness. Dale said at this point, the bottom is glass smooth because no one can get their finger down the opening to test. Possibly “plausible deniability”.



Now that we have the form finished, sand everything smooth and clean up any tool marks.



In the background, you can see the jam chuck I have for cleaning up the bottoms of hollow forms. I don't have a vacuum chuck so I finish them the simple way between centers. If you look closely, you can barely see the outline of the plug but the growth rings of the branch are all matched up well. I had an issue with twisting the wood while removing the tenon with the skew. I should have stopped earlier and sawn off the tenon and cleaned it up with sandpaper. Also make sure your bottom is concave so that the piece only touches the table top by the outer rim and you won't end up with a wobble.



All done and ready for a signature, date, and type of wood burned into the bottom then off to the finish station.

I hope this was of use to you and happy turning.