October 2019

Meeting Info

Our next meeting is on November 13th.

We will have three “mini demos” on Christmas ornaments.

See you there!

Club Challenge

Once again the challenge for the November meeting is anything you want it to be! Just bring something you have turned and you can be in the monthly drawing and have a chance at the annual drawing at the end of the year.

Dick did say that you get “extra credit” for bringing all off-center bowl or platter.

Club Officers

Sorry, but I made a mistake on the election of club officers in last month’s newsletter. At the September meeting, Tracy and Alan agreed to be the nominating committee for officer elections. They will propose a slate of candidates at the November meeting. At that time we will also accept nominations from the floor. Those nominees will then be voted on at the December meeting. Per our By-Laws, neither the President nor Vice-President can serve more than two successive terms in the same role. We are therefore electing a President and Vice President - which will have to change, along with a Secretary and a Treasurer. The secretary and Treasurer can run again if they wish.

Please consider helping with a leadership role in the PVWA. Contact either Tracy or Alan if you are willing to serve as an officer.

President's Message
Dick Anderson

Question/Answer from Woodturning Design

The best woodturning magazine, in my opinion, was Woodturning Design, edited by Joe Herrmann. It and several other magazines were published by All American Crafts, Inc. Unfortunately, this company went out of business and we lost a great woodturning magazine.

One of the most interesting features of Woodturning Design was a section titled "Ask Dale" in which subscribers could send in a question and Joe would have Dale Nish provide an answer. Dale Nish, started and owned Craft Supplies in Provo, Utah and was one of the world's best-known woodturners and writers. He was instrumental in starting the Utah Woodturning Symposium, which ran for 39- years and he published 3 woodturning magazines. His broad knowledge of woodturning and more than 30-years as a teacher made him a master of most of the tools and techniques used today. Also, he was a frequent demonstrator at many of the more prominent symposiums.

The October 2013 issue has a lengthy writing on drying and turning 'green' wood. Since it is so lengthy, here is part of the article.

Question: "I was given all the wood from a small, recently cut apricot tree as an early Christmas gift. It is very green and the center is rotting, but there is enough good wood to make some small bowls and other small projects. I have turned apricot after it was dry, but never when it was wet and I know you have. I would appreciate some advice on how to handle it: Does it crack? Does it warp? Can I microwave it to dry it successfully or should I rough it and let it age for several months? Any suggestions would be wonderful."

Answer: UNSEASONED BOWL BLANKS. Timber is very difficult to dry in thick pieces, due to the length of time involved and the fact that, in order to reduce cracking, the wood inside the block needs to dry at about the same rate as the outside of the block. Commercially, kiln-dried lumber is usually not available thicker than 2" and most often is available as 1' thick boards. Basically, roughing out bowls from "green" or unseasoned wood allows a blank that is 3" or 4" thick to be reduced to about the thickness of 1" lumber, only in the shape of a bowl. This reduced drying time, as well as cracking, dramatically. If you want to turn large bowls from solid timber, you must learn how to turn and season wet wood.

WALL THICKNESS. Roughed-out bowls will warp during the drying process, so the wall thickness must be adequate to accommodate warping. Wall thickness depends on a number of factors: moisture content of the wood; density; figure; species; stability; open or closed grain, etc.; shape; and desired finished thickness. However, I recommend that the wall thickness be uniform and about 10% of the diameter of the blank, or a minimum of about ¾". For example, a blank 10" in diameter would have a wall thickness of about 1". A 12" diameter blank would have a wall thickness of about 1-1/4". Smaller bowls will have a wall thickness of about ¾". These thicknesses will allow a finished wall thickness of ½" to ¾".

DRYING AND ROUGHING-OUT BOWL BLANKS. It is difficult to give a definitive way to dry roughed-out bowls, because so many variables may determine procedure or success. Some of the variables are air temperature, humidity, wood stability, moisture content of wood, figure or grain (crotch, stump, or burl), open or closed grain, density or weight, sapwood or heartwood, plain sawed or quarter sawed, tension wood, etc. It is not the intention here to deal with these in detail. However, following are a few conclusions based on years working with and turning green wood.

1. Partially seasoned wood (below 35% moisture content) is easier to dry than freshly cut, very wet wood.
2. Quarter-sawed wood is more stable and less likely to warp than plain or flat-sawed wood.
3. Open-grained woods are easier to dry than dense, closed-grain woods.
4. Fruit woods are difficult to dry, and the sapwood needs to be removed during the roughing-out process.
5. Don't turn or try to dry blanks that have the heart center in them. They will crack or check most of the time.
6. Burls are much easier to dry.
7. Crotch wood or stump wood is more difficult to dry than plain or quarter-sawed woods from other parts of the tree.
8. The harder and denser the wood, the slower it must dry and more care must be taken.
9. Direct sunlight causes more problems than heat or low humidity. Once the bowl is roughed-out, it must be taken care of or it will probably crack. Treatment of roughed-out bowls may be accomplished in a number of ways, but the objective is to slow down the moisture evaporation from the wood, particularly in the end-grain areas, so that the inside wood dries at about the same rate as the outside wood.

TREATMENT OPTIONS. Roughed-out unseasoned bowls should be kept in a cool area – on the floor if possible and away from the heat or sunlight. These precautions will help greatly to reduce or eliminate most problems with cracking. Some partially dry, open-grained woods may be dried without further treatment."

OTHER POTENTIAL TREATMENT OPTIONS.

1. Coat the bowl inside and out with green wood sealer.
2. Coat the end-grain areas with green wood sealer, and leave the flat-grain area uncoated.
3. Coat the end-grain area with paste wax and leave the flat-grain area uncoated.
4. Put the bowl in a box and cover it with shavings produced during the rough-out process.
5. Place the bowl in a plastic bag and every two or three days take it out and let the surface moisture evaporate. Turn the bag inside out and put the bowl back in. Repeat every two or three days until the moisture no longer collects inside the bag, and then leave the bowl out to finish drying. This method is usually necessary for dense hardwoods, which are difficult to dry.

Dale's write-up continues with "Turning the Bowl/Roughing Out for Drying, Storage Until Ready for Use, and Final Turning." I will try to cover these in my next newsletter message. It's a shame the publisher of Woodturning Design went out of business and no other publisher picked it up. If you happen to find someone wanting to sell their collection, you would be well advised to get them.

Demo on Hollow Forms

By Bob Smith

Bob discussed the basics of hollow forms and the use of the Trent Bosch jig as a helper, as well as using a laser and a video system to help with wall thickness.

Watch the video on the PVWA web page (www.pvwa.club)

User Experience

At the last meeting Dick started a meeting section where one of the members brings a piece they turned that is unique in some way and explains how they did it, challenges they ran into doing it, and how they overcame those challenges.

This month Buz brought a pine and epoxy resin bowl and explained the process. It was educational, enlightening, and entertaining.

Thanks, Buz!

Turning a Really Big Golf Ball

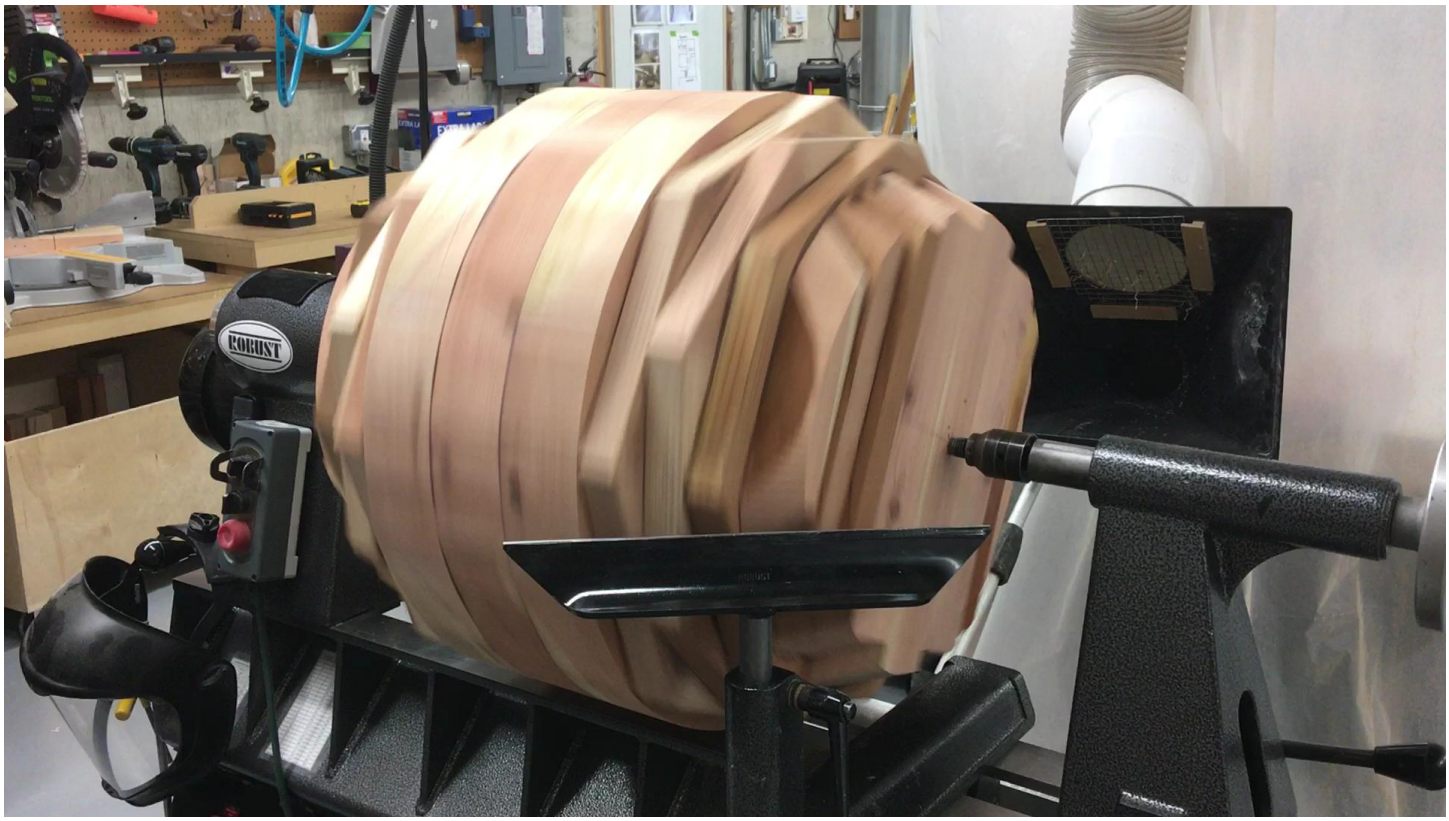
By Bob Smith

Several months ago Kelly Jensen approached me about helping him with a turning project – an oversized golf ball for use as a yard ornament. He wanted it to be as big as possible, which turned out to be just over 24" on my lathe. His lathe could do around 19", so we decided to do it in my shop. After (briefly) considering making it solid, we opted to a hollow approach – basically a segmented turning. The wood of choice was construction grade redwood lumber since it was to spend its life outdoors.

We started with 4x4 lumber to make the center ring. The goal here was to maximize the size of this ring then build out and down in each direction. By making the center ring about 24.5", and all other rings smaller, we would be assured that it would at least fit on the lathe. We settled on octagons for the rings. Trying to approximate a sphere from octagons, we laid out the sphere on graph paper and determined the diameter of each of the octagonal rings. We then determined mathematically what length the sides of the octagon should be to get that diameter as a circle touching each of the 8 sides. We then built two octagons at that size, and then moved to the next set. The center ring and the adjoining ring were 4x4's, the next 2 rings were 2x4's and the next was made from a 2x6. This combination may not have been the most efficient, but kind of evolved from what we had on hand that would work. The center 3 rings were cut into circles on the bandsaw to give us clearance on the lathe and the largest possible diameter. Gluing the first few rings to the growing blank was pretty easy but as they started getting smaller we had to use cauls to span the growing sphere to do the clamping. As we neared the ends, we made solid end caps out of 4x4 lumber to make sure we had enough depth on the ends.

Here are a few pictures of the blank being formed.

Now that the blank was complete, we put it on the lathe. It weighs about 75 lbs.



Luckily, it fit! There was about ½" clearance over the bed. We mounted it using a spur drive and a live center. The spur drive turned out to be a bad choice as the wood was so soft that when we slowed it down to stop, the piece would try to keep moving and tear out where the spur drive was. By the way, the only good way to stop a piece this big is to slowly dial the speed down as low as possible before turning the lathe off.

Note that the banjo and tool rest only fits off to the right side so this is where we did all our turning.

We made a ¼ sphere template and turned the right side to match the template. This is a far as we could go with the banjo where it was. We then flipped the piece left to right and turned the rest on the same side. This time we abandoned the spur drive and used a large cup center which worked better.

Voila! An (almost) sphere!

At this point we rotated the sphere 90 degrees and trued it up.

Now, for the dimples. We debated quite a while on how to do these. In the end, we opted for a plunge router mounted in a jig which was mounted in the banjo. The angle of the jig was set so a 2” core box bit would be perpendicular to the sphere surface. We would position the router where we wanted, plunge the bit in then move to the next dimple.

Several hundred dimples later (we lost count), the golf ball was complete.

Kelly then glued up a separate redwood blank for the tee. He used 4 pieces of 4x4 for the top and turned it roughly to shape with a mortise in the bottom. He then turned a tenon on a single 4x4 and mounted that into the mortise on the top piece then turned the tee to its final shape. Kelly and Cindy then sanded (lots of sanding!) and painted the ball and tee with outdoor paint.

And here is the final result. The ball is just over 24” and the tee is 37” long and 6” in diameter at the top.

A fun project, but we don’t plan on ever doing it again!

October Meeting Photos