



NORTH WARWICKSHIRE & HINCKLEY WOODTURNING CLUB

NEWSLETTER January 2022

www.hinckleywoodturners.org.uk

Notes from the Editor

Inside, you will find the demo by our own member Bill Bennett. Bill explained three methods of turning spheres. He said you could also just turn them by eye but I'm certainly not good enough to do that. Judging by the examples passed around during the demo, Bill's sphere turning methods produce impressive results.

Our next demonstration, on Tuesday, January 18th, is tool sharpening. Members can bring in one tool to be sharpened (if time permits). But more importantly, it is a chance to learn how to sharpen your own tools. From my tool sharpening days at Axminster, I know this is a problem for many turners.

At the end of last year, it looked like woodworking shows were back on the agenda. Woodworks@Daventry, AWGB seminar, Chestnut's Woodturning Weekender and the North of England show have all been scheduled for this year. Keep watching for updates, as Covid could scupper them yet again.

Get jabbed, wear a mask, stay healthy and **KEEP TURNING!**

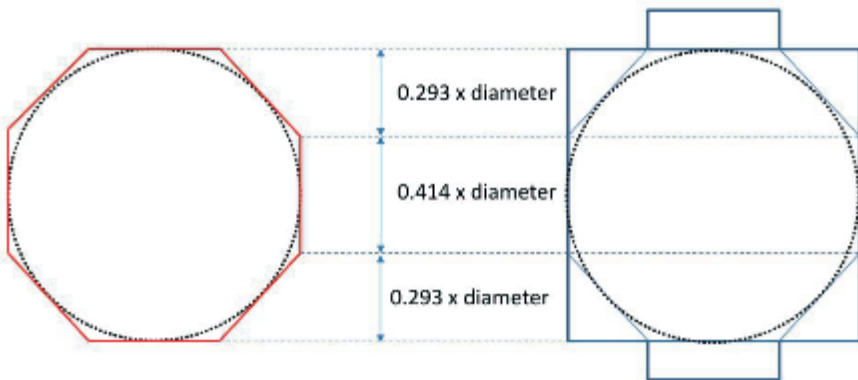
Regards
Rob Sheehan

Bill Bennett 4/1/2022

By Rob Sheehan



Bill described three methods for turning a sphere. In all three cases, Bill would start by turning the piece to a cylinder whose diameter was a couple of millimetres over the required final size. He would then mark out, and turn the cylinder, to an octagon (see below). This gives you a fighting chance of getting a pretty good sphere, as you only have to round over the eight points of the octagon. If you have a good eye for shape, you can instead turn it freehand!



Common Steps For All Three Methods - Create an Octagon

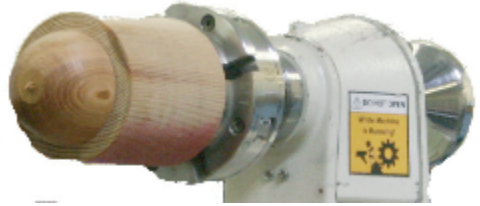
Hold the blank between centres and turn it down to 2mm larger than the required diameter. Turn a spigot at the tailstock end to 0.414 x diameter (spigot length is not important) e.g. diameter is 100mm, spigot would be 41.4mm. Using calipers set to the diameter, mark the length. Cut a matching spigot on the waste side of the line (0.414 x diameter). Now set calipers to 0.293 x diameter (e.g. 29.3mm) and mark a line in from each end. Now cut the corners off from the two lines down to the spigot. This is a sloping flat cut, not rounded. This leaves you with an octagonal blank. Measure and mark a line at the centre of each flat face - one on the centre of the blank, and one on each of the sloping sides. of the blank, and one on each of the sloping sides.

Make a Template

Mark out and cut a thin piece of ply so it has a curve slightly smaller than the required diameter. Press on the waste part of the blank to burn it to the exact diameter and a perfect half circle.

Method 1 - Jam Chuck

Follow the common steps. Now cut a 1mm vertical groove with the parting tool on the centre line. This gives you a perfect circle. Round over the



octagon's shoulders to give a rough sphere. Now mount the sphere in a jam chuck with the vertical groove now horizontal (see picture). Turn the visible half sphere down until it is level with the bottom of the groove. Adjust the size of the jam chuck to hold the new, smaller, half sphere and repeat for the other side of the sphere. The template also helps with the shape. Sand, seal and polish with the sphere between cup centres.

Method 2 - Cup Centres

Follow the common steps. Mark the centre line with a wide pencil line. Place the blank between two cup chucks, with the spigots top and bottom, instead of at the sides.



Look for, and remove the ghost image of the spigots. Gently shape the sphere until the horizontal pencil line just disappears. Mark another vertical pencil line. Remount the sphere so the pencil line is horizontal and shape the sphere again until the pencil line disappears. Repeat as often as is necessary to get a sphere to the required accuracy. Sand, seal and polish.

Method 3 - Use a Sphere Cutting Jig

Follow the common steps but leave the shaped blank slightly longer than its' diameter. With the octagonal sphere still between centres, mount the commercial or home made jig exactly on the centre of the sphere. Bill's jig fits his lathe, so that the cutter is exactly on centre height. The handle allows spring tension to be applied to the swinging motion of the cutter head.



The cutter is a solid TCT, round replacement cutter, from Axminster. Bill's jig has a length stop, so that several balls can be made to the same diameter. After cutting as far as possible between centres, the ball is placed between cup centres, the jig re-positioned on centre, and the spigots removed, to produce a perfect sphere. Just sand, seal and polish.



NORTH WARWICKSHIRE & HINCKLEY WOODTURNING CLUB EVENTS 2022

January	18th	Demo	Tool Sharpening. Bill + Rob + John
February	1st	Demo	Bowl turning. Bob Smith
	15th	Demo	Finishing. Chris Nunn
March	1st	Health & Safety, Equipment Maintenance, DVDs, Tools	
	15th	Demo	Web Site & Facebook. Rob Sheehan
April	5th	tbd	
	19th	tbd	
May	3rd	tbd	
	13/14th	Hopefully - Woodworks@Daventry	
	17th	tbd	