

## Paul Howard - 13th September 2018

Paul has visited several times before and has helped to run training courses at the club in the past but is probably better known as the man who has a "jig" for everything. Tonight was no exception, and he was able to keep us all entertained whilst he created a "Sphere-in-a-Cube"!

Being an engineer in an earlier life, Paul creates his own jigs and tools and in this case he modified a Cole Jaw set by adding nylon blocks correctly sized to securely hold a 75mm square block.

The block was positioned by bringing up the tail stock to a previously marked centre in the block this ensures that the block is central to the jaws.

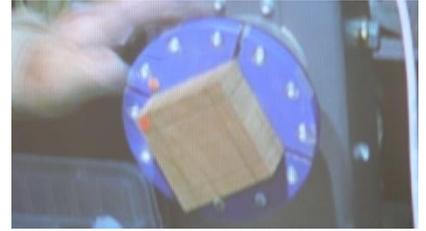
Having marked a line 12mm in from all edges a circle was drawn on each side so that the edges of the circle touched the lines.

The jaws were marked with a reference point and by a corresponding mark on the block you were enabled to return to the same place. Using a beading tool the size of the ball was marked 6mm inside the circle line. Paul started turning the edge of the ball using a spindle gouge before going back to the parting tool to go deeper.

By rotating the block the previous cuts were made on all six sides. Using a parting tool and going in at 45 degree angle on all faces until finally the ball was free.

Care must be taken at all times to avoid sliding off the ball and into the beading surround.

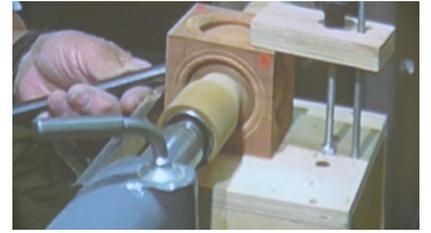
With two purpose made 'Cup Chucks' which were lined with rubber o-rings, final marks were removed from the ball and held in place to enable final sanding to take place.



As this picture shows the 'Cup Chucks' were made from a piece of sycamore mounted by a spigot and using a Simon Hope carbide tool the shape and size of the hole was defined. A groove was cut in the front rim of each piece and an o-ring was inserted and secured by super glue. This jig enabled the ball to be held and turned whilst the block was stationary and without marking the sphere.



With another jig Paul was able to hold the block securely and free from the sphere to enable final cleaning of the ball with light touches from scrapers.



By feeding through a piece of 400 grit and running the lathe at a slower speed the ball was sanded and whilst frequently turned the shape was maintained.



You may query the value of a ball in a block, but it's a bit like the journey being more important than the arrival, **its what you learn along the way.**

**I have a copy of Paul's instructions on how this was made so if anyone would like a copy please contact me, David Ritchie.**



The Chairman's choice this month was split into two categories the Novice section was Subhas Davda's lovely turned piece of lignum vitae with a stained oak finial.



In the advanced section Roger Rout turned a superb miniature table holding numerous items including one with an encapsulated ring which in itself was no more than 12mm high and 1mm thick.

The table was well presented this month with a vast variety of different skills

