

Eliminate Out of Round Pen Blanks

Les R. Elm © 2016

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When I first started pen turning back in 2001 I was using a pen mandrel and was having a lot of issues with pen blanks being Out of Round. To resolve the out of round issues I switched over to Turning Between Centers (TBC) with and without using bushings.

In order to TBC successfully there are a few things that need to be checked on the lathe setup.

- Install a 60° Dead Center in the head stock and install a 60° Live Center in the tail stock and slide the tail stock towards the head stock.



60° Carbide Tipped Dead Center



60° Carbide Tipped Live Center

- Lock down the tail stock and make sure the points on the dead center and live center line up point to point horizontally and vertically.
- Turn on the lathe and the points should stay lined up point to point vertically and horizontally.



Dead Center and Live Center Points Lined Up

When turning between centers only one pen blank at a time can be turned.

Once the pen blanks have been cut, drilled, brass tube glued in and the blank ends have been squared to the tube ends:

- Install the stock pen bushings into the blank ends, place between the dead center and live center, lock down the tail stock and tighten the tail stock quill onto the bushings.

- Turn the pen blank **Proud** of the bushings.



TBC Proud of The Bushings

- Loosen the tail stock quill and remove the bushings.
- Check the pen blank for any out of roundness.
- If the blank is not out of round continue to finished size.

Should the blank be out of round:

- Install the pen blank between centers without bushings and tighten the tail stock quill just enough to hold the blank when being turned with your chisel.
Be careful not to over tighten the tail stock quill as it will flare the tube ends causing the pen blank ends to crack.
- Continue turning the pen blank down the finished size using calipers sized to the pen kit fittings.



TBC to Finished Size