william wood-write

El Toro fountain pen instructions

Needed:
Mandrel A, bushing 80 A, drills 31/64 and 35/64, wood size – ¾" x ¾"

Preparing the blanks

This is a very large diameter pen, so take care when drilling the blanks. The bits are very large, so there is a high probability that the blank will split if the bit is allowed to exit the material without support. We recommend the blank length be the length of the tube plus 3/4" – allowing you to drill the hole in the blank without piercing through the bottom with the drill bit and preventing the blowout or splitting of the blank. Some penturners will drill both blanks with the 31/64 bit and then enlarge the hole in the short blank with the 35/64 bit.

1. Cut the blanks the length of each brass tube, leaving a little extra length to square off the blank after the tubes have been glued in.
2. Drill the upper blank – the longer one – with the 35/64-drill bit. This will be the larger bit.
3. Drill the lower blank – the shorter one – with the 31/64-drill bit. This will be the smaller bit.
4. Scuff the brass tubes with sandpaper to clean off the oxidation and give the glue a better adhesion surface.
5. Plug the ends of the tubes with a material of your choice – we recommend base plate wax – to keep glue from getting into the tubes. Just push the ends of the tubes into a thin section of the material to form a plug. *This is very important, as glue inside the tubes is a major cause of pen failure.*
6. Prepare your glue. We recommend two part epoxy glue – use a fast drying type, one hour or less. Be sure to mix it thoroughly. Wax or baking paper or even a Post-it notepad all make excellent mixing surfaces.
7. Roll one of the tubes in the epoxy.
8. Insert the tube with a twisting motion until it is almost entirely inside the blank. Then use a dowel or small stick to push it until the tube is equidistant between both ends of the blank. Repeat with the other tube.
9. Set aside until the epoxy has had time to reach its maximum strength.
10. When the glue has cured, use a hobby knife to remove the plugs from the ends. .
11. Using a barrel trimmer of the proper size, square off the ends of the blanks until you can see bright brass tube. STOP at this point. This can also be done with the proper jig and a disk sander. Improper tube length is another common cause of pen failure.

Turning the blanks

1. Put the blanks and bushings on the mandrel: clip and cap bushing (15.80 mm), the upper blank, centre band bushing (17 mm), tip bushing (14 mm), lower blank and end cap bushing (15.5 mm).
2. Thread on the lock nut and hand tighten. Bring the tailstock snug with the mandrel. Do not over-tighten, as it could damage the mandrel. You may have to add a spacer at the end.
3. Tighten the lock nut and lock the tailstock in place.
4. Turn the long barrel blank, leaving the wood a little oversized. Cut a 1/8” tenon down to the brass tube in order to mount the centreband. Turn the small blank to the desired contour, making sure that the area next to the bushing is turned to the size of the adjacent bushing.
5. Sand the surfaces in progressive steps until you get to 400 or 500 grit. For a high polish finish, continue sanding with Micro Mesh through to 12,000 grit. Apply the finish of your choice and polish.
6. Remove the blanks from the mandrel.

Assembling the pen

1. Carefully press the black plastic sleeve, unthreaded end first, into the centreband end of the long brass tube.
2. On the same end as the black threaded insert, press the centreband onto the brass tube where the 1/8” tenon had been cut. Press the clip/cap into the other end of the long tube.
3. Slide the large trim ring onto the end cap internal step first. The end cap will sit inside the trim ring. Press the end cap assembly into the appropriate end of the short tube.
4. Slide the small trim ring onto the nib coupler internal step first. Press the nib coupler assembly into the other end of the short tube.
5. Insert the ink cartridge into the nib and screw the nib into the nib coupler.