## Making Bowls From a 1" x 6":

Article by Rick Orr Front Range Woodturners January 8, 2008

List of Materials: Supplies / Tools:

1 - 28" Long 1" X 6" Finished Face plate w/ plywood disc /

Lumber If rough lumber, you will sandpaper need access to jointer, planer Face plate w/ waste block

and/or thickness sander. 50 mm Scroll Chuck
Safety Considerations: Revolving Center

Safety Considerations: Square

• Use Face Shield Clamps
Compass

Sandpaper - sheet 180 grit Flat MDF Piece - 9" X 12"

• Let glue dry 24 hours prior

to turning

Wax Paper Glue Press

Pencil Sharpie

Sam Maloof Poly Oil

Be aware of dust issues Cushion Material (Drawer Liner)

Lathe

Band saw w/ ability to tilt 45 degrees

1/2" Bowl Gouge 3/8" Bowl Gouge 3/8" Spindle Gouge

1/8" Parting Tool

50/50 Mixture of Lacquer Sanding

• Be aware of very sharp Sealer and Lacquer Thinner

edges

Lathe speed

Table Saw (Jointer, Planer, Thickness

on blank when first turning Sander)

Passive Sander (Sanding Solution) Various grades of sanding discs

**Titebond Original Glue** 

Background noise to a Paper

minimum

Paper Towels

Listen to your lathe/bowl

Optional: Vacuum System

Basic Instructions and Outline:

- 1. Select lumber to be used. If a person does not have the ability to finish rough stock lumber, then be sure to select finished lumber that is flat.
- 2. Cut 28" 1" X 6" lumber into two equal lengths.
- 3. Square (jointer or table saw) one long side of each of the two lengths.)
- 4. Clamp material with finished sides together.
- 5. Lay out outside maximum diameter of bowl on clamped material with compass. Be sure to leave heavy, visible lines for ease of viewing when cutting on band saw.
- 6. Continue to make smaller concentric rings with compass. Make each ring smaller in radius by the same amount as the thickness of the board. Mark ring orientation for future reference.
- 7. Remove Clamps. Cut out rings on band saw with base tilted at 45 degrees.
- 8. Sand feathers off of rings to insure clean, small glue joints.>
- Glue each ring together. Glue on both surfaces of each joint. Press and hold together on flat surface covered with wax paper. Hold for approximately 3 minutes. Set aside for 24 hours drying time.
- 10. Sand one side of each glued ring using the flat MDF piece (9" X 12") with 180 grit sand paper attached. Sand in 10 even strokes. Rotate 90 degrees, sand in same number of strokes. Repeat rotation 90 degrees until you have completed 360 degrees. Sand other side of ring using same procedure.
- 11. With the band saw table returned to 90 degrees, cut 2 circles from left over 1" X 6" pieces. Diameter of these circles should match the smaller diameter of the smallest ring section. In my case, approximately 2 5/8" in diameter.
- 12. Lay out general bowl blank shape. Keep ring orientation as noted in step 6. Rotate ring clue joint 3/8" on each ring so you don't have the glue joints in a single line. Use either stair or brick type pattern. Keep remaining sections in line with grain direction to avoid cross grain gluing. Mark one side with sharpie for future ease of reference.
- 13. Begin gluing largest two rings together. Apply glue to both surfaces being glued. Align pieces per sharpie line. Clamp in press for 1 hour. Continue with next ring and continue, adding last of the ring pieces, then two circles cut out in step #11. On last three sections, be sure to match grain alignment. Use wax paper under pieces being glued to keep press somewhat clean. Wait 24 hours.
- 14. After general bowl blank has been created, find center of the smallest section, in relation to the outside bowl lank diameter. Use flat surface and wall to mark center in four 90 degree positions. Mark center with center punch.

- 15. Mount bowl in lathe, using face plate with plywood/sandpaper on head stock, bring revolving live center up to center mark on bottom circle. Tighten and secure tail stock.
- 16. True up bottom of bowl and make tenon to hold in 50mm chuck. Use 3/8" bowl gouge and 1/8" parting tool. I believe I turned this at 810 rpm.
- 17. Remove bowl from lathe. Replace face plate plywood circle with 50mm chuck. Change speed to 1230 rpm. Install bowl tenon into chuck and tighten.
- 18. Turn inside of bowl with 1/2" bowl gouge to finished size.
- 19. Turn outside rim/edge of bowl with 1/2" bowl gouge.
- 20. Turn outside of bowl with 1/2" bowl gouge to desired size, shape, thickness.
- 21. Sand both inside and outside of bowl, still held in chuck. I started with whatever grit sand paper I needed (depending on how much tear out I had) and worked down to about 400 grit. On the lowest grit paper, I used the angle drill. From that point on, I used the passive sanding system.
- 22. When satisfied with sanding, apply coat of 50/50 mixture of lacquer sanding sealer/lacquer thinner to inside and outside of bowl wipe off. (If you do not have a vacuum system, continue with step 23. If you do have a vacuum system, jump to step 26.)
- 23. Remove bowl from chuck. Replace chuck with either face plate/plywood circle or face plate with waste block. Bring up tail stock with revolving center to center mark of bottom of bowl. Tighten and secure tail stock. Be sure to use cushion material between bowl and either face plate system to avoid damaging the sanded surfaces of the bowl.
- 24. Complete transition area between bowl body and bowl bottom. Use 3/8" spindle gouge for transition.
- 25. Trim up bottom of bowl to desired diameter and depth, leaving minimum center support from tail stock and revolving center.

  Remove bowl from lathe and trim of last bit of support material using knife or small saw. Clean up and sand bottom. Apply 50/50 mixture of lacquer sanding sealer/lacquer thinner to bottom of bowl. Go to step #30.
- 26. If using vacuum system, position bowl in vacuum chuck, bring up tail stock with revolving center to center mark in bottom of bowl. Tighten and secure tail stock.
- 27. Start vacuum system, Leave tail stock in place for as long as you possibly can for safety purposes.
- 28. Complete transition area between bowl body and bowl bottom. Use 3/8" spindle gouge for transition.

- 29. Trim up bottom of bowl to desired diameter and depth, leaving minimum center support from tail stock and revolving center. Remove tail stock and complete bottom of bowl, sand, and detail as desired. Shut down lathe and vacuum system. Remove bowl and apply 50/50 mixture to bottom.
- 30. Apply coat of Sam Maloof poly oil to entire bowl. Wipe off excess oil. Let dry for 24 hrs. Repeat coats of poly oil until desired finish is achieved. I usually do between 3 and 5 coats of the poly oil.

## COMMENTS ON THE UPSIDE AND DOWNSIDE OF MAKING THESE BOWLS

## **UPSIDE**

Inexpensive source of bowl blanks
Great practice on wood preparation
Great practice on band saw cutting - circle and 45 degree angle
Great practice on gluing
Great practice on turning techniques, tool position, etc.
Great practice on ability to sharpen bowl gouge
Great source of bowls for gifts

DOWNSIDE Limited shape of bowl

Richard Kuivila has come up with a wonderful jig for gluing the two halves together. To view the Powerpoint file, <u>click here</u>.