An Introduction to Segmented Bowls

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Why segment when there is a lot of good wood available in log form?

Recommendations…..

Design

Buy a book or look online for a pattern. There are many resources available.

Make a few projects using a plan before designing your own project.

Three books I recommend “Turning with Ray Allen by Dale Nish

The art of segmented Wood Turning by Malcolm Tibbetts

Segmented Wood Turning by William Smith.

Online resources- segmentedwoodturners.org

jerrybennetart.com

jrodgers.com

Woodturner Pro software ($$)

Critical points

- Cut pie shaped segments to form rings. Rings are used to form a bowl.
- “Dry” wood only
- Accuracy and consistency matter-tune machines-table saw, miter saw, jointer, disc sander
- Patience combined with perseverance
- Contrasting woods look good.
- Glue joints make the difference between good and excellent
- Math and geometry are important. I strongly suggest a published plan.
- Long strips save fingers, do not cut “small” pieces
- No end grain tear out-(except a solid bottom)

Level 1 segmenting-fastest way to get started!

- Use lumber that S4S
- Rip strips at table saw
- Consider making a zero clearance table/fence for your miter saw
- A table saw and miter gauge can be used also
- Choose a 15 degree angle for 12 segments
- Cut 3 segments and check for proper angle using a square
- Cut 9 more segments for a total of 12

Segment Length

- Diameter x 3.14 / number of pieces
- Example: 6” diameter x 3.14/12 pieces =1.57
- Add about 10% extra length to get the true diameter vs. the distance across the points
- 1.57” segment length rounding up to 1.75 remembering to add a little to semnet width as well.

Ring construction

- Lightly sand edges to remove ”fuzz”
- Dry clamp to check for gaps
- Clamp and then glue if there are no gaps.
- Glue is not an effective gap filler!

Flattening the rings

- A drum sander makes this very easy, however, check for even sanding!
- If you do not have a drum sander, then turn a flat disc. I suggest using a faceplate with MDF.
- Draw concentric circles about every inch.
- Using the circles, Center the ring and CA glue it to the disc.
- Use enough adhesive to hold the ring in place! Use a bowl gouge to carefully flatten the ring.
- Then use the sanding board to flatten tool marks.

Building a bowl with rings

- Glue a waste block to the solid wood base. I suggest a hard maple waste block.
- Flatten the face using a bowl gouge and sanding board.
- Glue the flat face of the first ring to the solid wood base. Be sure it is in the center of the base.
- Apply pressure to the ring and base to achieve a good glue joint and avoid a large glue line.
- Turn and flatten the other face of the ring.
- Center and glue the second ring to the first ring in a common bond or American bond brick pattern.
- Continue this process until the bowl is complete.

Turning

- Turn like a normal bowl like a solid wood bowl.
- Be sure to shape rim early on.
- Finish shaping the outside and then inside, sand and then finish of your choice.

Level 2 Segmenting

- Use rough cut lumber or use S4S stock
- Prepare wood-squaring sequence!
- Machines should be fine tuned, accurate, fences square, etc
- What type of saw blade to use?
- Build or buy a wedgie sled to use to cut segments-Accuracy should increase over a miter saw
- Follow level 1 segmenting guidelines once segments are cut

Level 3 Segmenting

Designs and color bands
There are many options and possibilities!

Some more common designs- Square wave
Dot to dot
Thunderbird
Diamond
Blanket

Not so common-Curved segments by Craig Kirks and then my adaptation of design

Curved Segments-The flower bowl

Beads of Courage

Beads of Courage Workshop with Scott Schlosser
AVW Skills Day - August 24, 2024

Each workshop attendee will have the opportunity to complete the following stages of making a beads of courage pot using segmented construction and turning techniques.
A discussion about how to size and cut segments will also be part of the workshop.

Glueing and marking the segmented rings. All of the segments are cut, but need to be glued for additional projects for BOC. Everyone should strive to glue at least one ring.

Turning the outside round and making the disk surface flat. The tenon will work with most #2 square jaw chucks.

Gluing a ring onto the flattened base from the previous step. This ring will be made before the workshop and already be ready to be glued onto the bottom disk. (It is not the product from the previous step)

Turning the bottom ring round and to dimension. Again, I will make this assembly before the workshop. (It is not the product from the previous step)

The final glue-up, top, and knob will be turned to dimension so that attendees will have a finished project other than final sanding and finishing.

Have fun, explore the possibilities, and be safe!