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American Association of Woodturners

OT Cutting Through the Layers

By Jon Magill

Ornamental turning, or OT as it's known, is another surface decoration technique used in woodturning. Many first-time viewers of OT are fascinated by the intricacy of the geometric patterns. But what happens to the geometry when color is introduced?

Using OT techniques to precisely cut through multiple, thin, contrasting layers produces an amazing array of polychromatic patterns.

What looks beautiful, though, presents challenges. The human eye is not forgiving. Small errors stand out, as shown in the photo *below right*. To achieve success, you must plan your steps and understand the nuances of your equipment.

Lathes are not perfect. Angular misalignment and concentricity errors frequently lead to disappointing end results. Concentricity issues often occur when moving work from one lathe to another, or removing work from a chuck and not repositioning perfectly. For success with this technique, it is best if you can devise a way to carry out all the steps on the same lathe.

You can apply this technique to three-dimensional projects, but it is best to start with a simple, flat setup. Here is how you can make a useful insert for a box lid.

The layered effect

Cut a few test patterns in scrap material until you have a pattern that will lend itself to this method. Note the depth of your test cut.

Begin by flattening a workpiece on the lathe you will use for the final decoration. Use your cutting frame (for details, see the Spring 2008 issue of *American Woodturner*) to make a pass from an edge to the center of the face. Then check flatness (**Photo 1**).

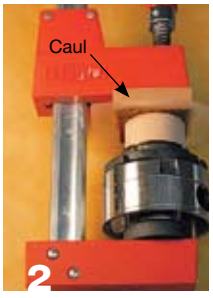
Cut out squares of contrasting veneers. (The examples *above* incorporate 2" squares.) Thin veneers 0.020" thick or less are ideal. The depth of cut determines how many layers will be required.

Onto your flattened workpiece, glue the contrasting veneer squares. Add a caul to ensure flatness. Clamping the assembly with the workpiece still in the chuck eliminates one more place where misalignment errors could creep in if the piece were removed from the chuck (**Photo 2**).

Typical angular misalignment error, exaggerated for purposes of this article, shows effects of not flattening the workpiece on the lathe.

1

Check flatness with a light source from behind (a flashlight is used here) and a straightedge to help identify any high or low spots.



2

While the workpiece is still in the chuck, use a caul (MDF in the photo *above*) to clamp the assembly. A layer of heavy plastic keeps glue off the caul and clamp.

3

The rewarding part of the process is seeing your pattern emerge during the cutting.

When the glue is dry, remount the chuck with the workpiece and proceed with cutting your pattern (**Photo 3**).

That's all there is to it. Experiment and have fun!

The Ornamental Turners International (OTI), an AAW chapter, will host a symposium Sept. 26–28 in St. Louis. You must be an OTI member to attend. For details, see ornamentalturners.org.

Send feedback, questions, and topic suggestions to jon@magill.com.