

Typical Segmented Lidded Box Construction



Cherry Log Slices, home dried this way to minimise risk of splitting and ready for squaring up. Short plank offcuts are treated the same way.



Once stock has been thickened and squared up, if cross grain orientation is suitable the main body segments can be sliced off as is.



However if long grain direction is needed for effect, the squared up slices need to be sectioned off at the appropriate length.



The short sections could be segmented as is, however as I use a Chop Saw to cut the segments it is safer to prepare the short lengths as Cross Grain Planks.



I use Hot Melt Glue for this, quick and strong enough as long as the glue is 'bubbling' hot. Assembled on a flat surface and newspaper.



I work with segments as sawn, accuracy of angles achieved by careful saw setup. Length stop set to suit target diameter, taking account of any segment join highlight thickness.



The number of segments obviously determines the angle to be cut, I usually stick to 12 pieces to add visual interest without looking too busy.



It is always worth a clamping check for any segment cutting errors before gluing.



I like to have segment join highlights, ether by incorporating thin slices of contrasting stock or leaves recovered from veneer offcuts.



Cut sufficient joint highlight pieces, check segment grain character and adjust position sequence to balance final appearance.



As Segment gluing can take 15-20 min., (48 pieces in this instance) a suitable working time adhesive is needed before firm clamping can be applied, essential if tight joints are to be achieved.



I use Cascamite for segmented turnings by choice, which has the required working time and its hard set also has the advantage of no joint creep.



True up the basic body cylinder.



Check the glue joint line quality.



Next stage is to form basic body profile and prepare mating joint surfaces.



Always endeavour to sequence turning so that segmented forms are held in compression.



As end grain is involved, the use of tenon joints to strengthen the bond against wood movement is prudent.



It is important that these joint faces are flat across the face if close fitting joins are to be achieved.



Cut Base and Top/Lid pieces from the same wood or complimentary/contrasting wood.



If necessary, due the thin section as in this case, mount them on Hot Melt Glue Blocks to aid holding whilst machining.



Turn matching tenons or sockets on Base and Top to locate with main body joints.



Glue up main components, the tenons aiding location and preventing mis-alignment. Glue blocks retained to facilitate final turning.



Mount on Base glue block, clean up outer profile using tailstock support to aid rigidity.



Part off top slice if grain matched Lid is intended or, as in this case, part out top core.



Finish internal and external turning to suit lid location, finish sanding as far as possible, and apply sanding sealer, part off from glue block.



Mount and form lid profile to mate with the main body.



Sand and finish as far as possible with sanding sealer, part off.



Reverse mount Lid and finish as far as sanding sealer.



Reverse mount Main body, turn base detail.



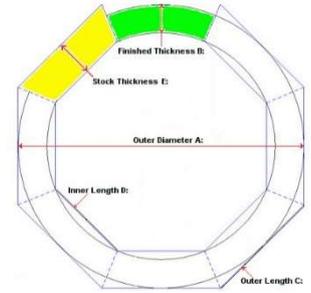
Sand and finish as far as sanding sealer.



Abrade sealed body and lid with domed and large buffing mops



Apply wax, in this instance Microcrystalline.



Segmented Turning Stock Size Calculator

<http://www.quest42.co.uk/woodwork/Segment/Seg-Calc.htm>



The forgoing methods are just one way of completing a similar project; if it encourages turners new to the concept of constructed turnings to utilise whatever equipment and tools they have to achieve similar results from off-cuts and oddments of wood without the need for formal turning blanks the WIP show and tell will have been worthwhile. ©