On turning inside a segmented vessel

Inside turning on a segmented vessel is pretty straight forward since rings can be added in any sequence the turner wishes (provided there is a plan in advance). One adds rings until the vessel starts to take form and then, before closing the vessel, the inside of those rings is turned. Thus, the inside of the vessel, still open, is turned like any bowl using whatever tool suits the need. If one plans it right, both halves of a closed vessel can be hollowed out that way without the need for hollowing tools and the attendant skills in their use.

This may seem like a trivial matter but consider the issues involved with turning the inside of a closed vessel. Once the vessel is closed the tool must enter through the opening and contact the area to be removed without grabbing the workpiece and yanking it off its fixings. Since riding a bevel inside a closed vessel is knotty at best, almost all inside turning is done with scrapers; either flat tools ground to scrape or a bit of sorts ground so as to mimic a tiny scraper. When turning a closed vessel from a solid piece of wood, the inside surface is cut away in the circular motion of the lathe by the tool as you turn; thus, the surface is by nature smooth – at least to a reasonable extent. In other words, there aren't facets for the tool to address as the lathe turns.

Now look inside a segmented vessel. There is the potential for facets at every interface. If you had planned ahead and had hollowed out the rings before closure, the facets are minimized and maybe even present a smooth surface for your tool to ride. If you had indeed turned out the inside before marrying the two halves you may have also looked ahead to the nature of the marriage to ensure that the rings mate without leaving a problematical edge. By that I mean that the diameter of the inside edges of the mating rings are identical, or at least close to identical, so that when the rings are mated there is no edge on either that stands out from the other; thus, to grab the tool as you try to correct the problem through the small opening.

This may not be a problem if your vessel has a very small opening through which an inquisitive finger is prevented from discovering your imperfection; but many vessel designs require a wider mouth and which are thus open to the scrutiny of a curious fellow turner or other critic.

Only two options occur to avoid this embarrassment. The first is to make sure there is no edge that needs clean up through the mouth of the vessel after it has been closed or at least is not catch prone if clean up is required. The second is to make sure that the mismatched edge is out of sight and out of the reach of a probing finger.

To make a good mating of the sections of a vessel you need to do two things: Make the diameters of the mating rings (at the mating edge) equal to one another and make sure your halves are aligned so that the edges of the matings are co-axial. If either of these two conditions are faulty you have at least some amount of the offending edge exposed to either catching a hollowing tool edge or being found by the investigating finger.

The second approach – keeping the mismatched edge out of sight and feel – depends on the design of the piece. If the design is an open mouth vase with no neck you can achieve half of your objective by making the mating edges far down from the mouth, but it will still be visually apparent. On the other hand, the choice of a long neck vessel could give you both – out of sight and out of touch.

It's likely you'll ultimately want to have many designs; some with open and some with closed mouths. By the time you get to the realization of the need to take remedial action for a mismatch, you have a lot invested in the project ranging from material preparation through glue up, sanding, assembly, and turning.

The thing to do is to think each step through so that you're not confronted with having to perform hollowing operations at a disadvantageous stage of your project.