



**MIKE ASHEY PRODUCTIONS
PRESENTS
FIXING RESIN HULL FIT CHALLENGES
BY
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Resin has many unique qualities, but it also has a non-dimensional or non-uniform shrinkage problem and a warp problem. Generally the larger the mass of resin the more likely there will be shrinkage and parts of any size can warp. That's why two part resin hulls do not match up and thin or petite parts can warp. Fixing shrinkage problems on resin hulls is not hard to do but it can get messy! You will need a band saw, clear packaging tape, an indelible marker and two part resin. The technique presented in this article takes advantage of the quality of new resin sticking to completed castings. The technique is easy, and it produces great results but it is not for the faint of heart!



The first step in attaching the upper and lower hulls is to remove any excess casting material. If you do not wet sand be sure to wear a dust mask as the resin particles can irritate your lungs.



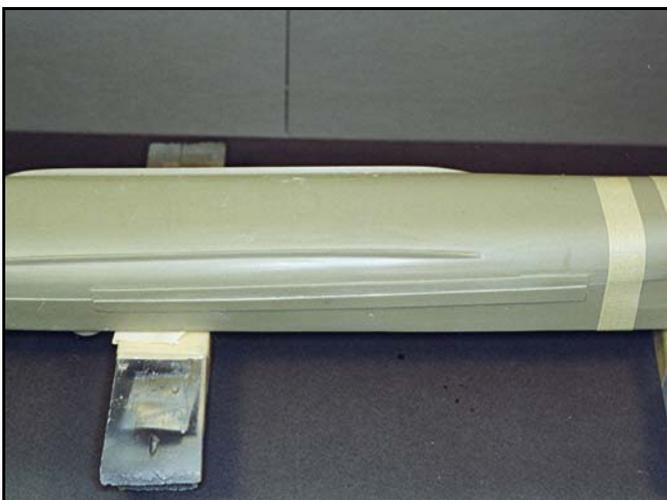
This is a good example of the shrinkage that can occur on resin hull halves. There is no way these parts can be mated together.



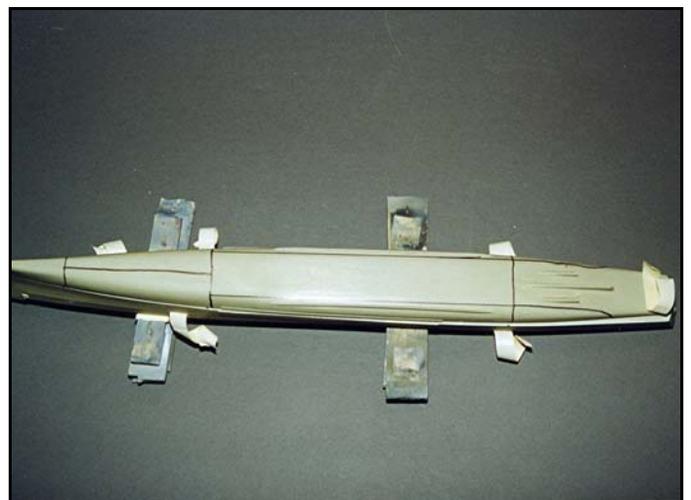
Here is the opposite side of the hull and while the edges are almost lined up there is also a shrinkage problem with the length of the part as well as its width.



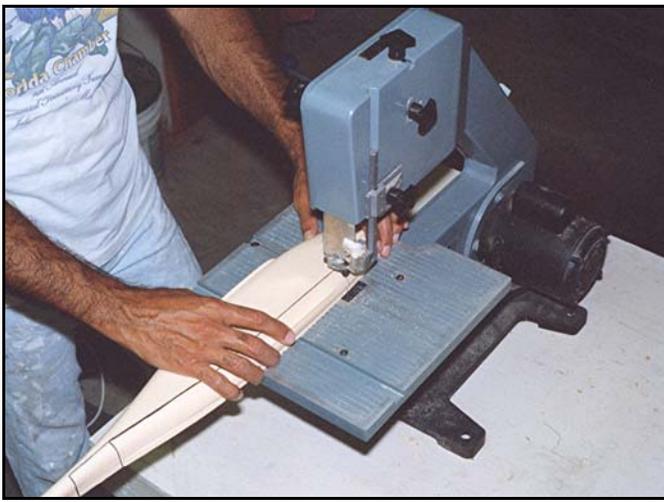
If the shrinkage wasn't enough of a challenge, the lower hull also warped towards the bow!



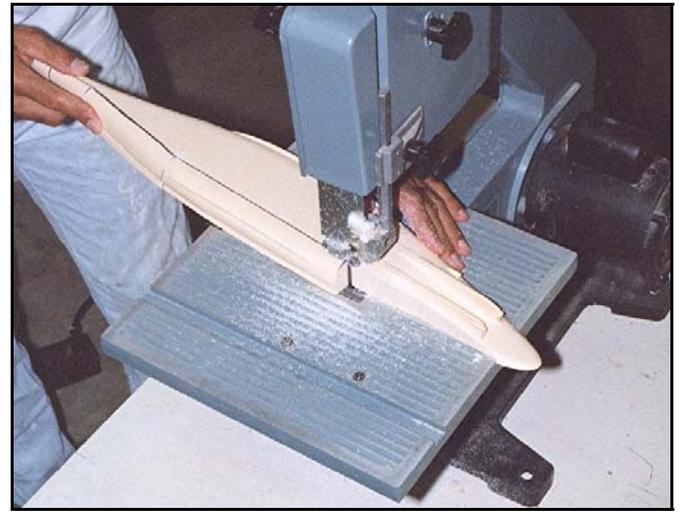
Here you can see how one side almost lines up while the other side close to the bow had both shrinkage and a wrap. Most modelers would decide to make a waterline model but there is another way, surgery!



I outline where cuts in the hull need to be made to allow the edges of the lower hull to mate up with the edges of the upper hull, using an indelible marker.



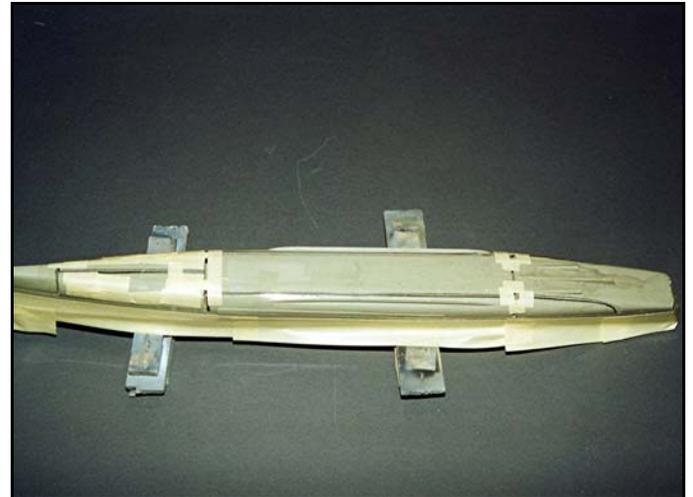
Here is where steel nerves are needed. I cut the lower hull up using a band saw! I make the short cuts first. Be sure to wear a dust mask as the resin particles go all over the place!



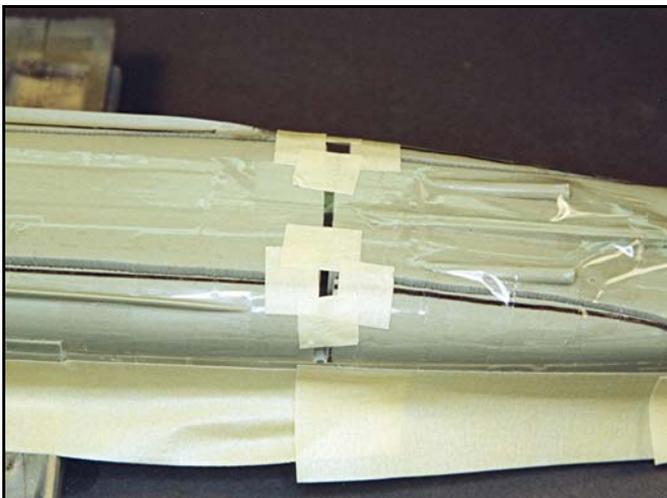
The longer cuts take a steady hand. Be sure that the band saw base is level and at 90 degrees to the saw blade. The blade will cut through resin like a hot knife through butter, so be careful when cutting.



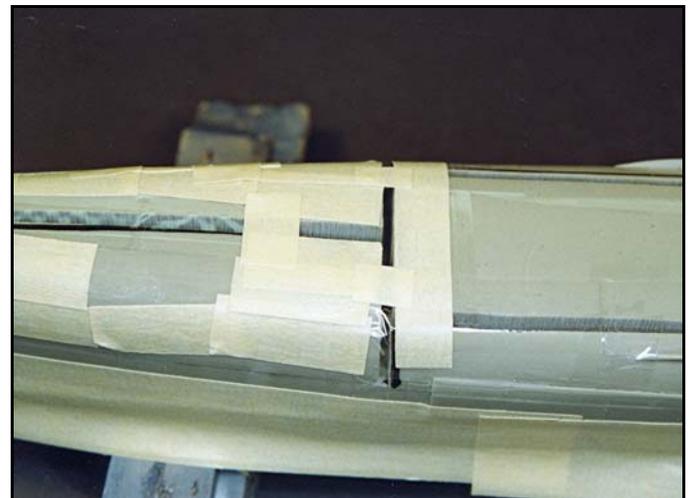
Now that all the lower hull parts are cut its time to glue them to the upper hull. Lining up the outer edges of the upper and lower hull will leave gaps between the cut up lower hull sections.



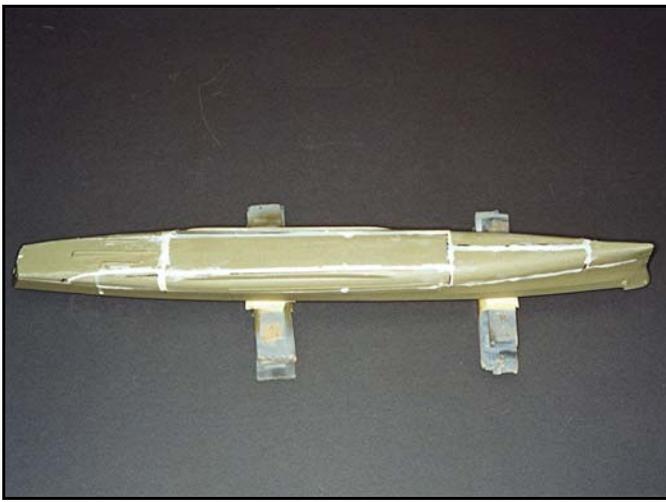
Once all the parts are glued, cover the gaps between the sections with clear packaging tape. Leave small openings so that resin can be poured into them.



Here is a close up of the packaging tape. You need to make sure that the tape is attached to the edges of the openings so that resin will not seep out onto the surface of the hull. Also note the openings locations for pouring resin.



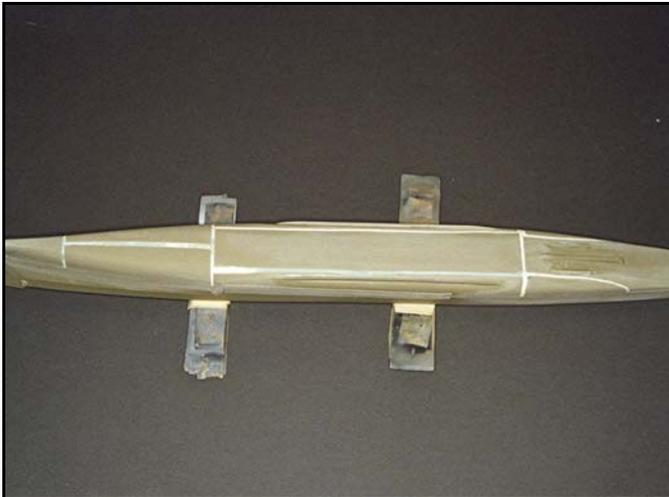
I use masking tape to outline the openings and to protect the surrounding areas from over pours of the liquid resin. Also, be sure to put the packaging tape along the seam line between the upper and lower hull.



The resin was carefully mixed in small batches and poured into the openings. It looks a bit messy, but all the openings and tiny voids have been filled. The resin even seeped into the areas along the seam line between the hulls halves.



To help fill any remaining gaps between the upper and lower hull I added tiny amounts of resin. One of the great qualities of resin is that new resin sticks to old resin which makes it a great filler!



An initial wet sanding smoothed out the resin pours and helped contour it into the shape of the hull.



The completed hull looks a lot better! Finer grits of sandpaper are being used to smooth out the resin and contour it into the hull. Always remember to wet sand resin.



The hull is now almost complete. Once it is primed a final check will be made to fill any remaining imperfections and voids.



Here you can see how well the new resin blended into the original hull casting. This hull is the old Bluewater Navy USS Atlanta which is the finished model on the first page of this article. This model is also in the ship gallery.