Wood/Epoxy Construction

Why consider the wood/epoxy method and why is this the best material for your next Boat?

Sam Devlin of Devlin Designing Boatbuilders Inc.

Olympia, Wa. 98502 (360) 866 0164 www.devlinboat.com The Monocoque Structure of the Stitch and Glue Boat (this example is our 50ft. Moon River design built in 2013)



Survivability Factor

- 1) Strength
- 2) It Floats
- 3) Epoxy encapsulation eliminates the only potential drawbacks
- 4) All areas and surfaces of the boat inside and out are accessible and viewable.
- 5) It has an 'R' factor and doesn't want to support sweating of the hull, so no mildew issues!
- 6) The Wood/Epoxy hull can be built literally bullet proof!

Monocoque Construction and why it simply is the best option!

- 1) All parts of the boat contribute to the overall strength and rigidity of the structure
- 2) By making all parts become part of the structural integrity of the hull you have a lighter and much stiffer overall structure.
- 3) Design can be integrated with structural engineering to make a very strong and lightweight hull, and results in a vessel with amazingly solid movement thru the water.

As the panels are assembled and then mounted to the boat.



Panels are added to the hull setup.



Stitch Up is completed and hull is now ready to cold mold the extra plywood layers on this 48ft. Hull. Total thickness of the laminate is 1 ¹/₂"





The first 3 layers are stapled to the base Stitch and Glue structure, then the final fourth layer is screwed and glued, Screws will be removed.



Sheathing is done on the exterior with a layer of glass cloth first and a final layer of Dynel cloth set as the final layer.





When Sheathing is completed the stem and keel structures are added and then they are glassed to the core structure.



This shows the stem and keel just before and after mounting to the hull.



The bottom is thicker on this design but the spray rail will disguise any change in thickness.



Spray rails are now mounted.



Fairing happens at every step to give us the 'Devlin' finish.



At this point all the exterior structures are fastened to the hull and sealed with many layers of epoxy.



Peel ply was used for the stem/keel glassing to help eliminate some of the sanding, this is removed after the epoxy cures.



Time to start applying the exterior paints.



The hull is now faired, primed, and ready for scribing the bottom paint line.



Note the fairness of the hull!



Bottom paint line is set and rolling jig assembled over the upside down hull.



Rolling jig in place and with the help of cranes we start rolling her rightside up.



On her side we can then pause for a few moments before starting to let her down on the second ½ of rollover pleasures.



Time to finish up.



And finally we see her rightside up.



Now we finish the interior glassing and sealing of the hull and bulkheads.



The cockpit area is just about finished now.



Cabin top beams are laminated and engine compartments are sealed prior to adding sound insulation.



Forward cabin areas are readied for interior paint application.



All areas are sealed with epoxy before paints are applied.



Starting to frame up the deck now.



Details and some priming shots.



Cabinsides are now being fit.

Fitting the cabinsides.



These are the cabin roof beams



Cabin roof is now framed up.



Cabin sides are done and then primed.



Cabin top is fastened in place and topsides priming and fairing continues.



Finished shots of focsle


These are the port and starboard head compartments.





2nd Stateroom (2 berths)



Interior Main Salon views.



Galley and helm seat





Looking aft views from helm/dash area

Looking aft to the stern



Looking aft view of Dinette





Work continues late on the night before launching!





Virtually Any type of design can be built with the Wood/Epoxy Construction Method



Working with the Builder/Designer

• This is an obvious choice as your interpretation of both the Designer and the Builder are harmonious!

The warmth, beauty, and integrity of Wood



The Survivability Factor, Wood Floats, especially when its epoxy encapsulated

- This complete wooden structure is comprised of wood components all carefully fused together with epoxy/fiberglass joints that literally weld the histrength components together. When the epoxy sets solid you have a structure that rivals any other construction medium.
- Thank you for allowing me the time to show you our method and our expression of art!



33ft. Red Salmon 2014



31ft. Pyladian



33ft. Storm Petrel





Pelicano 18 Shrimper









Storm Petrel









Pelicano 20 Bassboat



33ft. Scarlett

Macaw



Scarlett Macaw overhead





Showing off her Arse











Sockeye 45





Sockeye 45



Sockeye 45

Sockeye 45 4



Kingfisher 33 interior


Kingfisher 33









Surf Scoter 23



Surf Scoter 23



Surf Scoter 23









Sam Devlin and Son's Mackenzie and Cooper



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