

## PROJECT 3:

### MAKING A MOULD FROM A DINGHY

A mould can be taken from an existing boat, provided there is no infringement of design copyright. The mould is made by simply laminating over the existing hull.

(1) Prepare the boat hull by thorough cleaning, removing any loose paint, etc. On wooden boats, round off hard edges, especially on clinker built hulls, by sanding down. To ensure a good finish on the



mould, it is worth painting the hull with a two part polyurethane varnish. Follow the manufacturers instructions for mixing and application, and leave to cure thoroughly, for at least seven days. Polyurethane marine paints are resistant to the solvents in polyester resin, but this is not the case with some other paints - if the hull is already painted, try testing a small area with a little resin.

(2) Wax and polish with four to six coats . For the best results, each coat should be buffed then left for an



hour to harden thoroughly before the next is applied.

3) Use a wax release agent to provide a surface coat.

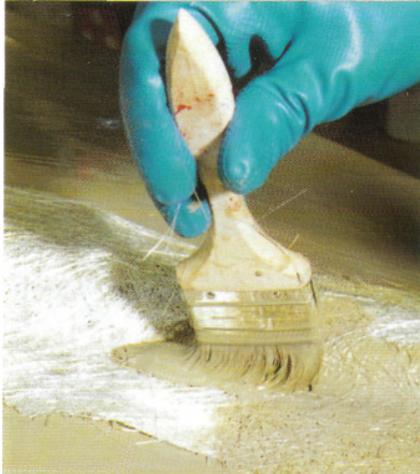


4) Decant a working quantity of gelcoat into a mixing bucket and add catalyst. Stir thoroughly, then use a brush to cover the hull evenly with gelcoat. Wait until the it has become tacky, which will normally take an hour or so.



5) Add catalyst to lay-up resin (Resin A). Paint the Resin A over the gelcoat.

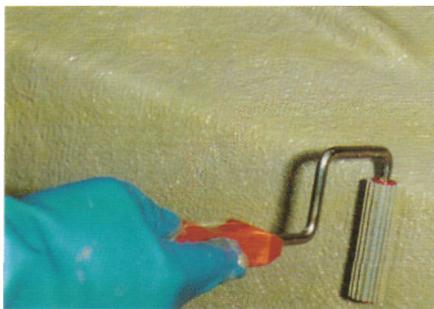




6) Lay a piece of chopped strand mat on the wet resin, and stipple it down with a brush. Remember do NOT "paint" to and fro. A resin applicator roller can be used instead of a brush.



7) Make sure the glassfibre is thoroughly impregnated with resin ("wetted out"), then use a metal laminating roller to consolidate the layer. As you continue



laminating, replace your brush frequently, leaving the used ones to soak in Brush Cleaner for cleaning later.

8) Repeat steps 6 and 7 to build up further layers. Four layers are needed.

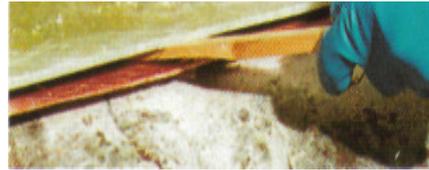
9) Leave to cure for a while, then place lengths of paper rope former in position.



Laminate over the paper rope to create strengthening ribs.

10) Leave the laminated mould to cure. When it reaches "green stage", you can trim off rough edges with a Stanley knife.

11) When cured, the laminated mould can be released from the "plug" (the original boat). If this proves difficult (often due to inadequate use of release agents), wooden or plastic (but not metal) wedges can be used to free the laminate, but take



care not to scratch the surfaces - such blemishes will be faithfully reproduced on future mouldings. Since water soluble PVA Release Agent was used on the plug, you could try pouring luke warm water between plug and mould - this will often facilitate release.

12) Replace the mould back on the plug and leave to cure completely (preferably for at least two weeks) before finally removing - too early removal can result in distortion. A timber framework can be bonded onto the mould to give added support.