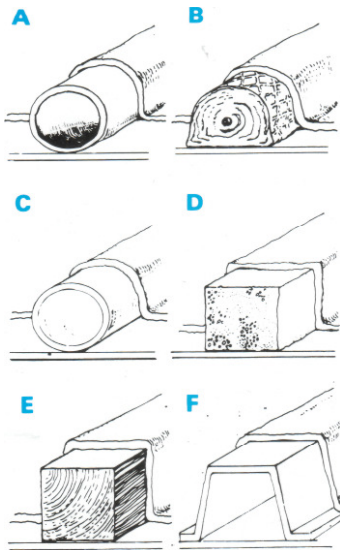


FORMERS

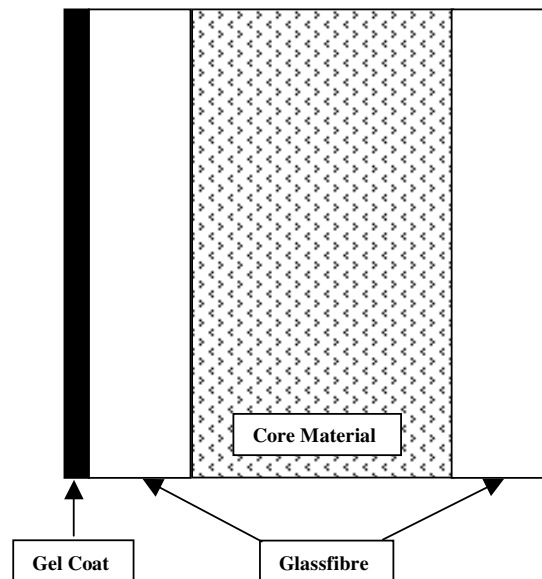
A former is anything which provides shape or form to a GRP laminate. They are often used as the basis for stiffening ribs or box sections. A popular material for formers is paper rope, a stiff "cable" made of paper wound on a flexible wire core. This is laid on the GRP surface (it can be easily bent to follow the contours) and is laminated over to produce reinforcing ribs, which give added stiffness with little extra weight. The former itself provides none of the extra stiffness - this results entirely from the box section of the laminated rib. Wooden strips, metal or plastic tubing, and folded cardboard can all be used successfully as formers. A very popular material is polyurethane foam sheet, which can be cut and shaped to any required form. Polystyrene foam cannot be used, as it is dissolved by the resin.



Some typical formers: A) Metal tube B) Paper rope C) Cardboard tube
d) Foam strip E) Wood F) Folded cardboard

CORE MATERIALS

Core materials (usually polyurethane or PVC foam sheets) are used in sandwich construction - basically a laminate consisting of a foam sheet between two or more glassfibre layers. This gives the laminate considerable added rigidity without greatly increased weight. Foam materials are available which can be bent and folded to follow curved surfaces such as boat hulls. Foam sheets can be glued or stapled together then laminated over to produce simple box structures, such as storage tanks, without requiring a mould. A variety of materials can be utilised for sandwich construction, marine ply being an obvious example, but most of them are relatively heavy and can only be used where excessive weight is not a problem



SHEATHING

Sheathing is used to provide a wooden surface with a protective glassfibre skin. It can be used on any wooden structure, and was once very popular as a means of renovating an old timber hull. It helped to strengthen the hull, seal leaks, improve the appearance, reduce attack by worms or rot, and extend its life. Coating resins have largely superseded this method, but sheathing is still a useful means of giving added protection to cockpits, deckhouses and wooden structures generally.



FINISHING

Glassfibre laminates and resin castings can be sawn, drilled, sanded or polished. Most tools intended for metalwork (eg, hacksaws) will be adequate for cutting or trimming laminates and castings, and further shaping can be done with rasps and files - tungsten carbide tools are particularly useful for this. Further finishing can be carried out with progressively finer grades of Wet & Dry

paper, used wet, with GRP polishing compound being used for the final rubbing down. All of this work can be done by hand or with power tools. Grit and particles from both the glassfibre and the hardened resin can be injurious to eyes and lungs - it is therefore important to wear goggles and purpose-designed breathing masks during finishing. This is absolutely essential when power tools are used.

