Wood



Wood is the only natural boat building material used today, and although it generally requires more maintenance than the more common glass fibre vessels, a well cared for character boat built of wood will always attract admiring glances when she slips into view.

Features of wood

Boat building timbers vary immensely and can prove problematical in use. Here are some points to watch out for.

Wood moves!

The fibrous nature of timber means that it has a tendency to absorb moisture from the atmosphere. The result of this is that the wood swells and contracts to varying degrees depending on the type of construction. For a varnish or paint coating to stay intact on the surface of moving wood, it will need to be quite flexible in nature.

Wood rots!

Moisture contents in wood can allow the growth of fungal spores which leads to rotting and decay. Wood can also be subjected to attack by marine borers which eat the wood fibres. Wood therefore needs to be protected against attack and high moisture content by good quality preservatives and coatings.

Wood types

In boat building there are many different woods which can be used, the nature of which can differ immensely. In order to understand how to deal with each type, it is useful to consider their various characteristics.

Hardwoods

Hardwood comes from deciduous trees, which generally grow slowly. As a result of this they have a tight grain when compared to softwoods. This characteristic of the grain tends to bestow an aesthetically pleasing contrast between the rich brown colour of the spring growth and the darker summer growth. Additionally, this tight grain has good strength characteristics across the timber as well as along its length. For these two reasons, many hardwoods are popular for their decorative properties and as boat building materials in their own right. Certain hardwoods are particularly popular:

1. Mahogany – Mahogany will last for many years in a marine environment with little protection as the seawater has an antiseptic quality. The same is not true with regard to freshwater, which will lead to rot and decay if allowed to permeate the wood fibres. Mahogany should, therefore, be protected from freshwater at all times and wherever possible washed down with seawater.

Uses: planking, interiors, veneers.

2. Teak and iroko – Teak is a particularly oily timber with a natural resistance to rot and decay. Additionally it contains silica, which gives it hard-wearing characteristics. For this reason, teak is the king of decks. Iroko contains even more silica and is often used in hard-wearing areas such as cleats, gunwale rails and coamings.

Uses: deck planking, exterior hardware, interior panels.

3. Oak – Ferrous metals, such as steel and iron, react badly with oak due to the tannin in the fibres. This will cause dark staining and even chemical attack on the metal by the tannic acid which is formed.

Uses: framing, interior panels.

Wood

Removing all loose and flaking material ensures good adhesion.

Softwoods

The grain in these woods is long, straight and generally wider spaced than hardwoods as these trees grow faster. This means that their strength is mostly along their length so they are used in such applications as masts and spars, tillers, rubbing strakes, oars and the like. More recently, it has been used in modern epoxy strip planked hulls.

Occasionally, softwoods can have unusually high levels of sap which manifests itself as amber. This can produce weaknesses in the timber and cause paint or varnishes to become detached.

Preparing a wood surface

Bare or new wood should be clean, dry and free from grease. After sanding, smooth with 280 grade dry sandpaper along the grain, and remove all the dust.

HINT

UP TO 80% OF THE DURATION OF A JOB CAN BE SPENT IN PREPARATION AND PRIMING AND NOT A MOMENT OF IT IS WASTED. GOOD PREPARATION IS THE KEY TO A SUCCESSFUL FINISH.

A vacuum cleaner is ideal for this purpose, although vigorously brushing along the grain will work as well. Having removed the dust, wipe the surface with a dust wipe.

Oily woods such as Teak and Iroko can present a problem for varnish or paint adhesion. If the surface is wiped down with International Thinners No. 9 this will remove traces of the oil and any remaining sanding down dust.

If the boat spends time in fresh water, it will be particularly prone to attack from rot and fungus. Pre-treatment with Intertox® preservative is therefore vital. Intertox has an active ingredient which protects against wet rot, dry rot and fungal stains.

CAUTION

Do not use Intertox with UCP.

If the timber has become grey or blackened and is to be varnished, either abrade back to remove the stain or alternatively a solution of oxalic acid (obtainable from the pharmacist) will often gently remove the stain returning the wood to its original colour.

Intertox is a registered trademark of Akzo Nobel.

A well prepared surface will be smooth and even, clean and sound.

Once this has been achieved, it should be primed prior to the application of the final paint system.

Priming wood

The purpose of priming is to provide protection to the substrate and to promote good adhesion of the paint system.

To promote deep penetration of the first coat, primers can be thinned by up to 20%.

For oily woods such as teak and iroko, it is worthwhile applying a coat of Perfection for Teak, which can serve as a primer for all products.
UCP is not suitable for oily woods.

Handy Specs

PRIMING WOOD

Above Water	Conventional	No. of Coats	High Performance	No. of Coats
Preservative	Intertox (if needed)	2-4	(not needed)	
Surface Primer	UCP* or Yacht Primer thinned 10-15%	1	UCP*	1
Surface Primer	Yacht Primer	1	Interprotect	1
Filler	Interfill 100 (if needed)		Interfill 200/Watertite (if needed)	
Primer	Yacht Primer	3	Interprotect	2

Below Water	Conventional	No. of Coats	High Performance	No. of Coats
Preservative	UCP* or Primocon thinned 10-15%	1	Intertox (if needed)	2-4
Surface Primer	Primocon	1	Interprotect	1
Surface Primer	(not needed)		(not needed)	
Filler	Watertite (if needed)		Watertite (if needed)	
Primer/Tiecoat	Primocon	2	Interprotect	2

* UCP is not suitable for oily woods and MUST NOT be used in conjunction with Intertox. Up to 4 coats can be applied if necessary.