FACT SHEET

ALUMINIUM BOATS

All structures have their own particular set of problems in a marine environment. This is particularly so of aluminium boats.

Surface preparation is the key to successful painting or the re-coating of this material. Even the most modern protective coating will fail to give long term protection if applied to a poorly prepared surface.

Aluminium is a difficult material on which to apply surface coating finishes. Today, there are products and systems for all types of craft and it is important for the boat owner to familiarise him or herself with the most suitable product for their own requirements. There are three steps in preparing aluminium for painting. These are:

- Degreasing: newly manufactured aluminium usually has roll-forming oil deposited onto it. This must be removed by washing the surface down thoroughly with epoxy thinners/cleaning fluid and clean rags, changing rags frequently to avoid contamination.
- The surface should then be abraded in order of effectiveness by either whip sandblasting, disc grinding or by hand. Sandblasting is recognised as the superior method, followed by disc grinding involving surface grinding using right angle head rotary surface grinders fitted with 60 grit aluminium oxide discs. Finally, hand abrading can be used for small areas using 80-120 wet and dry paper.
- Acid Etching: A suitable acid etching solution, applied in accordance with the manufacturer's instructions, will return the surface to new. This must be followed with a thorough fresh water scrub down and period to allow the surface to dry.

On completion of the three surface preparation steps, pre-treatment should then follow immediately to avoid oxidation and recontamination of the surface. Two alternative systems are available for aluminium, which include etch primers or chemical conversion coatings. The last mentioned should be applied by professional applicators, which is regarded as the superior pre-treatment system. Etch primers are suitable for small craft and difficult components such as aluminium masts and spars.

The next stage of painting aluminium surfaces is filling and fairing to provide a smooth surface on which the paint can be applied. Advice on these steps can be obtained from retailers or from customer technical assistance advisory services from the paint manufacturers'.

Finally, the surface can be painted. Systems approaches are used these days to achieve the best technological results. This means the primers, undercoats and finish coats should be coordinated with systems developed by manufacturers.

Generally speaking, three types of finish coats can be used, as follows:

- One pack or durable marine gloss;
- Two pack polyurethane, which offers excellent gloss, chemical and colour retention;
- Two pack linear polyurethane. This coating is non-yellowing and designed to give high gloss retention and provide a chemically resistant finish for many years to come.

The correct treatment and painting of aluminium boats will ensure that maintenance remains at a minimum, in both cost and time, and people can enjoy their boating, whether on a small sailing dinghy or larger vessel.

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