

FROM CONCEPT TO COMPLETION

Part 3: Making sure she's fair in more ways than one.

At the beginning of the previous article in his series I mentioned that boat building seems so easy in theory, but when it comes to physically building the craft, it's a totally different story.

Even though I acknowledged that, I still fell into a big trap — a trap I only realised when I walked into Two Oceans Marine's huge hangar-like factory and saw for myself the ongoing work on the

hull and the finishing off of the male wooden "plug" for the topdeck moulding.

This sight immediately made me realise that in writing about this "build" from a distance, I had made the task seem far, far simpler than what was actually happening on the factory floor.

Most of us have an idea of the way the average ski-boat is made — a female mould is created, into which the glass-

fibre is laid and, after a few days of curing, hey presto, out pops the completed hull.

The Two Oceans Marine 48 customised sportfisher is moulded completely the opposite way. Therefore, when the hull is released from the plug, the inside of the hull is smooth but the outer surface shows the raw glassing. That's why, while the craft is still on the plug it is, for want of a better term, plas-

1.



2.



tered with a fairing compound that enables the entire hull's external finishing to be sanded (known as fairing) by hand using longboard sanders.

This arduous task takes weeks and weeks of manual labour, sanding with boards ranging from one to three metres in length. It requires between two and four men to sand the surface until it is glass-smooth and totally devoid of raised or lowered surfaces. Only then can it be sprayed and finished with the highest grade of epoxy coatings.

Watching it made me tired, yet trying to explain the enormity of this task in the written word still makes it sound too easy.

Below Mark describes the design and manufacture of the topdeck. He is a master of understatement, and he also makes it sound far too easy to build a craft of this size. However, I suppose when he compares the 48ft sportfisher to the 75ft Power Cat he's also currently building, the process of building the smaller craft seems simpler.

I was totally overwhelmed by the enormity of both tasks.

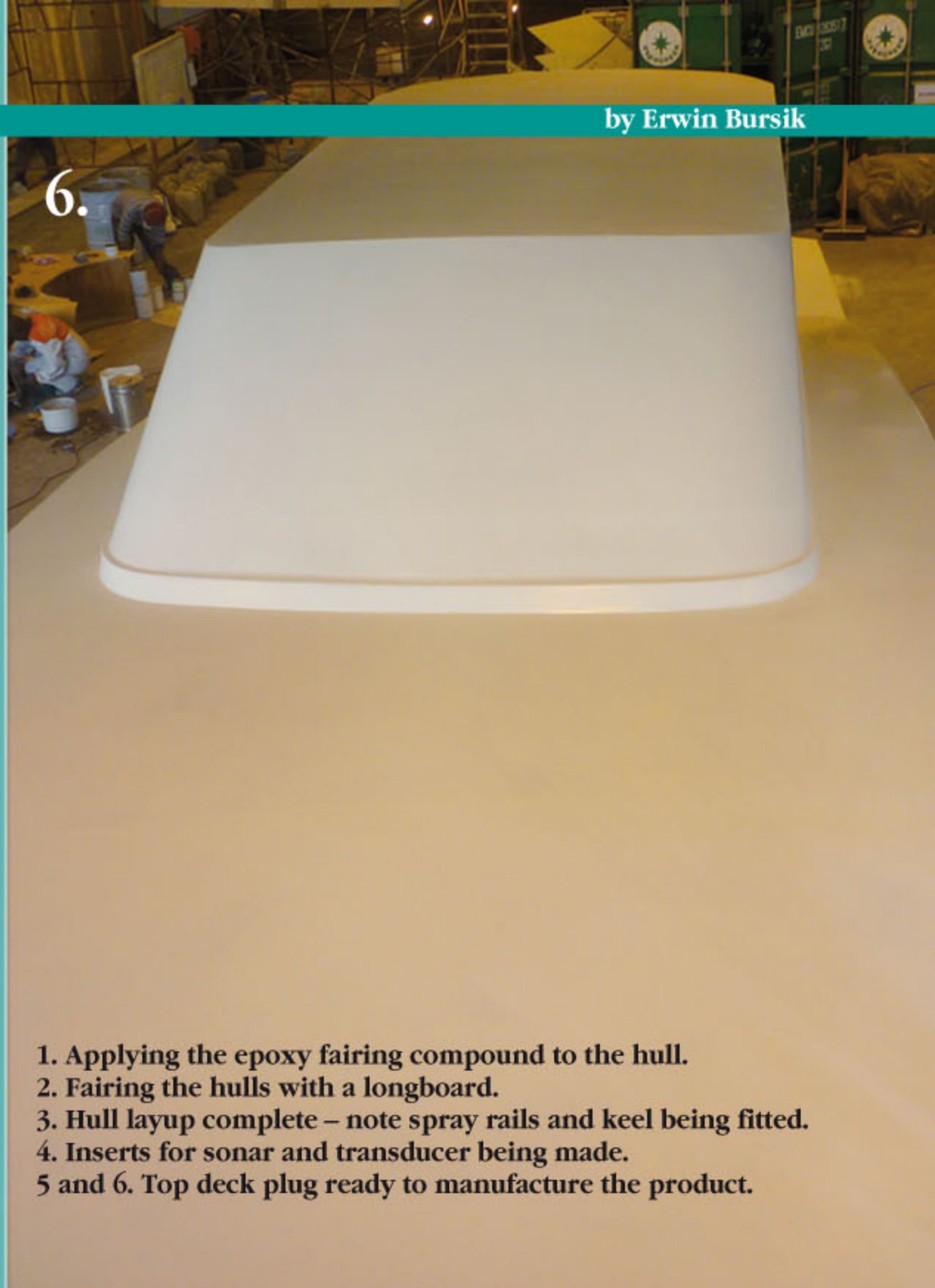
Over to Mark ...

"Having finalised the shapes of the upperdeck and fly-bridge, we followed the same process as that of the hull to construct the upperdeck. The flybridge and hardtop will follow thereafter.

"As far as the upperdeck module goes we wanted to keep the centre of gravity as low as possible, whilst still accommodating sufficient space in the engine rooms above the engines for maintenance, cooling, etc., a decent amount of headroom in the saloon and a good cockpit to saloon deck level, bearing in mind that the cockpit can become covered with at least 100mm of water if you're backing down and there is a bit of a sea.

"The sides of the cabin have been kept straight so that we can install the custom manufactured sliding windows being made for the boat in the UK which will provide good natural ventilation in the cabin when the aircon is not in use.

"The topdeck plug has been faired and painted and is now ready to build the product. The hull has been completed and is now being faired which is an extremely time-consuming process where we apply an epoxy compound to the entire surface before sanding down with "long boards", some up to 3m long with four workers pushing it up and down the boat all day. To date we have used 1 000m of sandpaper and are still only on 60 grit. We will eventually sand the entire boat down to 1 500 grit at



1. Applying the epoxy fairing compound to the hull.
2. Fairing the hulls with a longboard.
3. Hull layup complete – note spray rails and keel being fitted.
4. Inserts for sonar and transducer being made.
- 5 and 6. Top deck plug ready to manufacture the product.





the topcoat stage.

"The keel of the boat has been made of solid E-glass for the boat to rest on when she has to come out of the water. A special section has been designed around the purpose-selected Furuno sonar which has a 180mm head that will be able to be deployed below the bottom of the hull, as well as a specifically selected transducer to run a commercial-fishing-sized echo sounder.


"At the moment we are cutting the main structural bulkheads from foam and will be laminating them on a large vacuumed table with the same epoxy system as the rest of the boat. Once these are ready and the hull is fair, we will demould the hull and turn it over."

During my visit to the factory where I viewed the semi-completed male mould of the topdeck, I was privy to many of the decisions that have to be made when transferring the designer's computerised drawings into, at this stage, timber, and then, in conjunction with the client, to be 100% sure that what he agreed to on paper is what he really wants on the finished boat.

Among others, there were the questions of gunnel height, fishdeck area, placement of the fighting chair to support the swing arch of a 130 lb marlin rod attached to an angler in the fighting chair, how much space should there be between the footrest of the chair and the transom and gunnel for the wiremen and deckies to work, plus many, many more major and minor details that go into a personalised craft such as this.

Then there are the major things to be taken care of, like ensuring that when the hull mould is turned over and the topdeck hoisted by crane to be placed on top of the hull, it must fit! There is no latitude for it not fitting perfectly. To ensure this, all measurements are done with electronic/laser equipment to ensure that minimal tolerances are achieved.

Only then will Mark be satisfied that the Two Oceans 48 Sportfisher is ready to receive her engines and have her saloon, instrumentation and final furnishings attended to.

I was astounded at the progress made between my first visit and this one, and look forward to hearing about and hopefully seeing the marriage of topdeck to the hull — and being able to share this progress on the building of the Two Oceans 48 Sportfisher with *SKI-BOAT* readers. 

Computer renderings of what the finished craft will look like.