

# Southern Clipper

## 12m fast cruising cat *... an update*

■ by KEITH EMMS

**T**HE 12m was turned over to right side up in March and at that stage was fully clad up to the decks, faired and anti fouled. What is being done now is the decks top sides, cabin, soles, engine bays, etc.

The boat weighed on the crane a remarkably light 1600kg. Not a hairline crack appeared, the monocoque construction in the aluminium alloy with its pop rivets, bolts and screws were completely intact without any sign of movement even after hanging at four stories on one hull. Was I nervous? ... not that much as it was insured with OAMPS

which took the heart in mouth effect away ... to a certain degree! Braced the stern, as the transoms were not completed but did not bother with a forward beam. Some times you just gotta believe the designer, especially after 700 boats.

I expect it to go into the water with the two 30hp four-stroke Mercury outboards in their pull up engine bays and with bunks and some fittings installed at around two and a half tonnes. Fully rigged and ready to sail below four tonne. Bruce McConkey from Boat Craft Pacific ... a major supplier ... was impressed with the strength and lightness of the construction. He also commented on the ability of the design to allow total ventilation throughout the entire craft. I used marine 9mm Pacific Maple ply with 380 glass outside only and epoxy inside. I will now look at composite foam as with

the alloy frame and small panels a much smaller section can be used which offers another option. The beauty of the frame is you can fit gear anywhere with total ease and strength. Alterations are easy and you can shift mountings with great flexibility.

### **The pros and cons with this construction method**

**Cons:** It's easy, and very light ... and suits one off builders. It's very cheap ... strong and huge on size below. Any boat can be designed and built using this

**A revisit to the frame of the 12m.**





### Material costs so far

Total \$25,284.00

*And the breakdown is:*

Alloy \$4250;

9mm ply ... Pacific Maple \$5200;

All fibreglass including filler \$8370;

Special cast fittings for joining the alloy \$2784;

All consumables such as screws, rivets, sanding discs, gloves, tapes, glues and adhesives and etc \$4350.

Because the fibreglass work had to be redone and a large amount of unnecessary extra materials used, I imagine the true costs of all fibreglass would be more likely in the region of \$5000 ... however as we are giving the true story ...

Labour hours: My estimate to this stage is 3500 hours. Again this was the first. If one used construction ply and cheap resin and glass, less fastenings and cheaper you could reduce costs by \$5000 ... not me, I don't want to be in a big blow thinking about the money I saved.

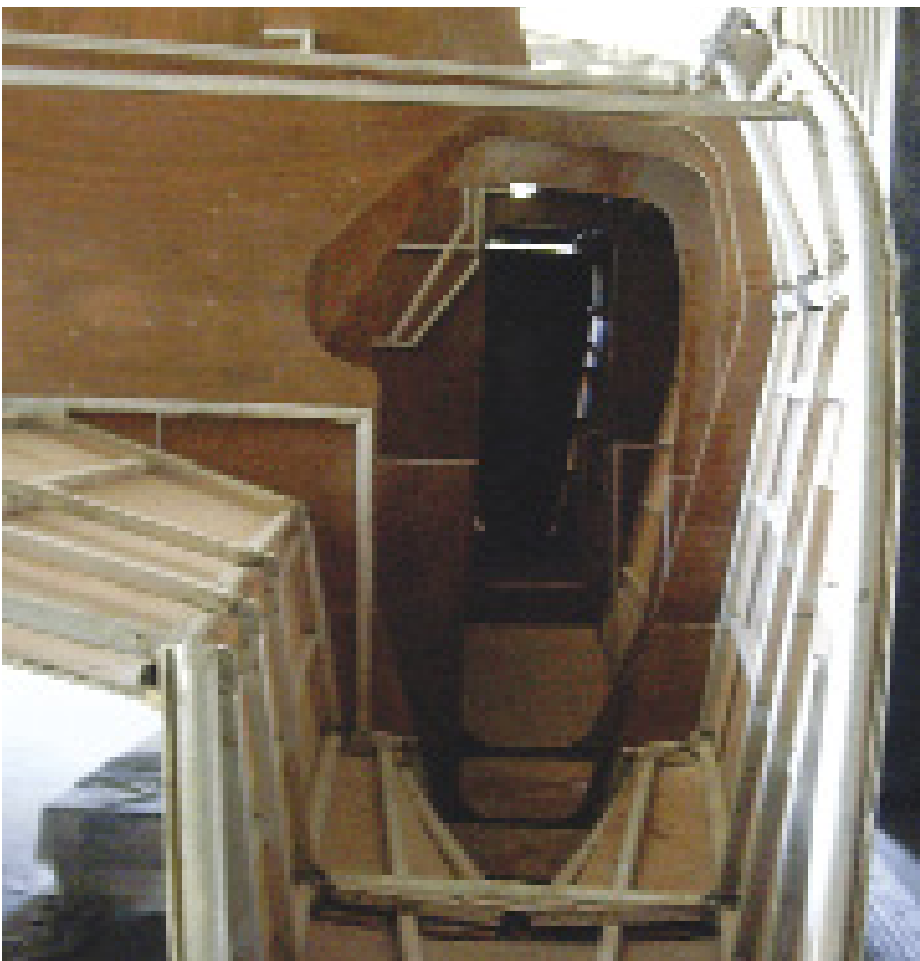
**Against.** Of course the labour is longer than the foam boats. It's fiddly doing the frames as a lot of drilling and riveting is involved. On a production side ... and that's where I'm looking. Building overseas is a real possibility for the reasons of getting a lot of people to do the frames in a hurry. If you have a simple can't make mistakes design with low cost readily available materials, and a non technical build procedure, obviously a third world country like India makes a commercial venture competitive, why India? ... they speak English ... no communication breakdowns. The political and legal systems are similar to ours ... less potential problems with partners. Read as not ending up under house arrest and trapped in a foreign country. India is also the youngest country in the world as far as person's age is concerned.

Finishing up to the stage of going in the water, which will include engines, tanks, some instruments and mostly finished furniture wise, dagger board (4mm alloy 2400mm by 900mm) and rudders in should be around a further \$25,000 and 1000 hrs ... a lot of boat for the dollars.

Looking along the port hull with the single daggerboard leaning against it. (above)

Looking through the transom. (below)

construction, after all most aircraft are built this way. The boat so far is hulls and bridge deck finished and ready to paint outside. All decks mostly clad and ready to fibreglass some bunks and steps ready to epoxy. Cabin soles ready to epoxy.





Coming out of the shed for turning over. (above left)

Going back into the shed after being turned over. (above right)

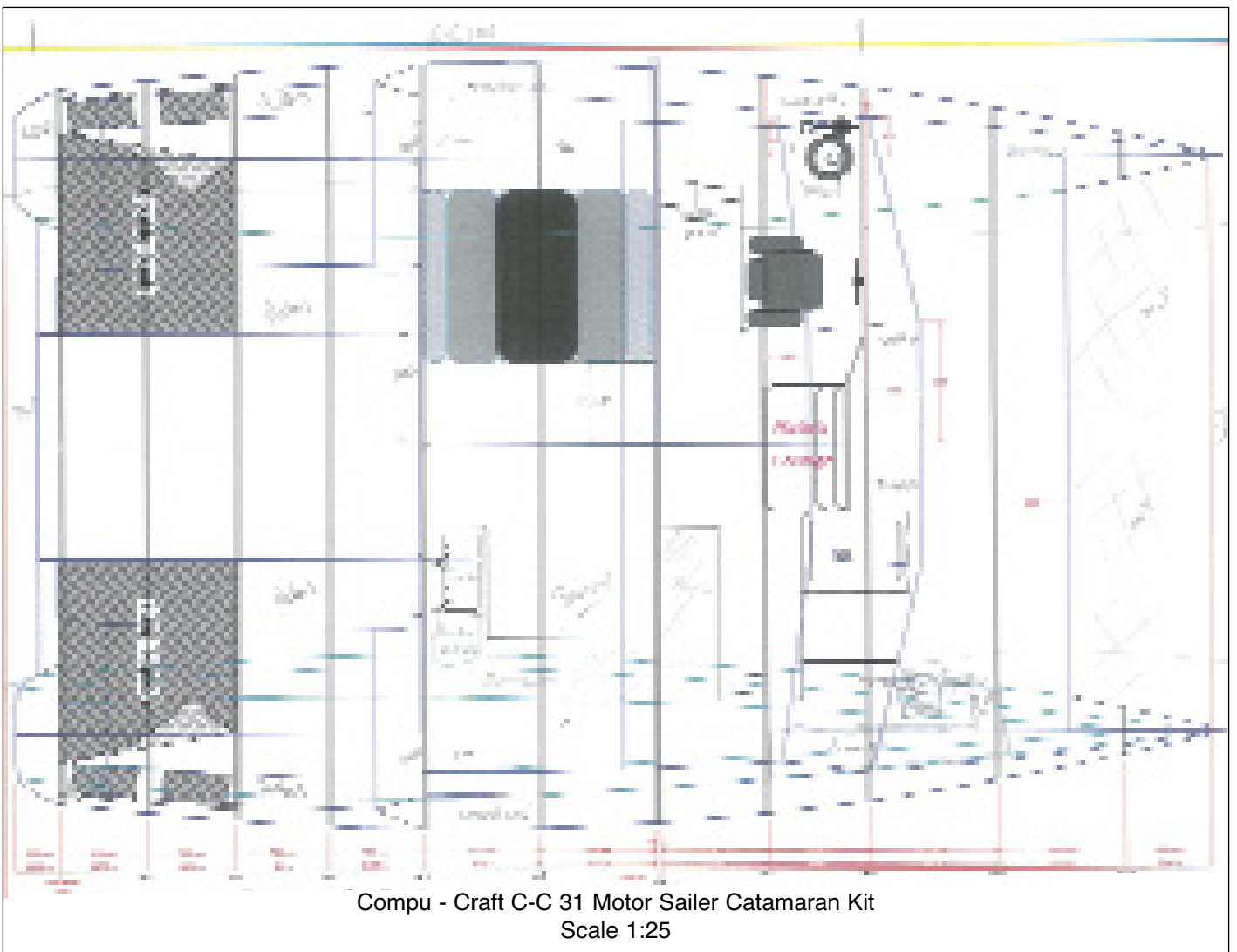


### 31' powercat/auxiliary sail cat

The second boat being built is for a client who's brief was. A power/auxiliary sail cat with good headroom, a remote area for children, good accommodation, head and shower and all in 9.5m I briefed the designer Col Clifford and plans were organised.

The client's previous experience is one of the share deals with a powerful monohull cruiser.

His objections were ... can't get the boat when required, boat travels with nose up attitude and all the champagne is tilting back, uses fuel like a passenger plane, can't go out in anything over a flat



calm, no room to sleep more than two and because of different weight and constant engines, props, plates problems, resulting in call outs.

The craft shown is an adaptation of a 30' cruiser that Col had drawn. He widened the beam to (19') for sail to be installed at a later date, put the same 30hp outboards inboard in bays as the 40' above, and increased the interior head room (ex-AFL footballer). Add mini keels and there you are.

The frames are almost finished and further stages of this boat will begin in two months.

This boat is being built on a cost plus

20% agreement, where the client over five stages pays for rent, contract labour, materials. All the previous at trade price. I like the idea of building boats as a co-op, where everybody makes and saves money. We are budgeting on \$175,000 plus the 20%. This does not include the rig and gear associated with sail. The flexibility of this system is the builder doesn't have a heart attack if a cost area blows out, the client has complete control over cost, can pull the pin at any of the stages, and so a closer working relationship is forged between the two parties. Before each stage a meeting is held and the next stages costs and details are formatted.

The boat will be built as the 12m ... ie frames built of pop riveted box alloy, joined at the chines and keels by round section and cast joiners. Stringers are box section and the cladding is 9mm best grade marine ply fibreglassed outside and epoxy coated inside. Two separate cabins with large queensize bunks, a chill out area for kids ... TV, games. Head and shower and some accommodation in the bridge deck salon. The boat will cruise around 15 to 18kts and be capable outside. ❖

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