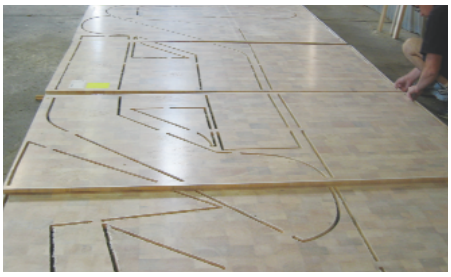
Spirited 380 Company boat progress report

by CRAIG SCHIONNING

Building our company Spirited 380 has been a great opportunity as the designer, to see this concept take shape and have the ability to refine the build process along the way, it has been very exciting.

THE Spirited Assembly System (SAS) has proven to go together better than expected. Because this system incorporates the boat being built the right way up, some major advantages have been reinforced.

Kit delivered straight off the truck.



Panels being joined. Note every alternate panel can be lifted to allow for gluing.

Firstly, with no strongback frame to worry about, the hulls simply fit straight into the pre-cut hull cradles and this is on day one!

Secondly, the advantage with the Spirited pre-made moulded hulls and decks is that no temporary hull frames are required, allowing this stage of assembly to flow along very quickly.

Something else I noticed, is how easy it is to not only access the boat at any point along each hull but also the ability to install anything located low in the hulls, traditionally a very awkward and time-consuming area to work in.

Experiencing this first-hand while fitting the cabin soles and related webs, I could from outside the hull with everything at my fingertips, quite a luxury for any boatbuilder.

Something else that impressed me was the speed in which the boat went together, in the first two weeks of assembly the boat really leaped ahead. The large hull panels all fitted well with minimum fuss, with no time-consuming strip-planking, the progress was rapid. Bear in mind there was three to four weeks of pre-assembly work done before hand. Tasks such as joining panels, building the composite forebeam and other preparation work before assembly.

It is always very interesting to see something created in your mind, turn into reality. I believe that the best possible scenario is a designer building his own design, especially the prototype. Things always take on a slightly different shape in reality opposed to on paper or even in 3D on a computer screen.

With continual refinement and improvement being done as our company boat is being built, there is comfort in the fact that future builders will have any minor imperfections ironed out for them. Processes as indicated in the plans are also improved, where required, to help make tasks easier and quicker.

Each part of the assembly process is being documented in the form of video footage and step by step photos which will be compiled into a DVD that will be included with the plans in the future.

Seeing somebody doing the job is the best way for someone to understand it.

Both hulls ready for bulkheads to be fitted. Day one of assembly.

Just two weeks later!

Unbelievable progress in just two weeks.

The modular type of construction means that things like furniture modules can be assembled on the workshop floor making every part of that module easily accessible. Tasks like taping the joins, fairing/painting, locker door cut-outs, even latches and hinges can be done off the boat. The area in the boat where a module will be fitted can also be prepared in the way of flow-coating/painting to avoid having to access this area later.

Reducing labour-intensive tasks like strip-planking means that a higher level of pre-cut parts can be supplied. Using pre-glassed Duflex panels from ATL Composites for all pre-cut parts allows for secondary hand laminating to be

vastly reduced. Any curved areas can be 'Kerfed', which means cutting through one of the skins to allow the panel to bend. The closer the cuts the tighter the bend, this technique can achieve some attractive flowing lines, all from simple pre-cut flat panels. Duflex panels are super light and produced under strict guidelines, the overall structure will remain very light and strong. With less hand laminating involved in the construction, it will save weight and reduce any risk of DIY mistakes etc.

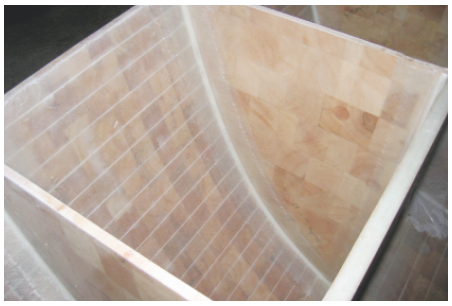
Furniture modules assembled separately.

Aft steps and cockpit furniture assembled.

As an example, the entire main bridgedeck is pre-cut using Duflex panel with the curved front section simply Kerfed at the spacing instructed in the plans (*see photos*). This is done on the inside face of the panel, avoiding awkward hand-laminating overhead, instead the laminating is simply laid over the Kerfs on the inside surface and wet out. The aft section of the panel is dead straight, meaning it is level, enabling furniture or related parts in this area to be fitted very easily, as you will be working off a level surface.

The bridgedeck panel is one of the biggest parts but is still manageable with four people. We found that by lifting one end at a time the panel was lifted up into position below the bulkheads quite easily.

Fitting hull parts with ease.



The Kerfs on the inside of the bridgedeck panel.

Fixing the curved section of the bridgedeck up in position.

Aft cockpit seat being assembled.

Using a few wheelie bins to provide the desired height, to support the panel until ready for final fitting.

Because the fore and aft hull panel joins butt together leaving mostly a small gap for filling along the length of the join, this triangular void can be filled after the panels are fitted, making this job much more manageable for builders with less helping hands. The Duflex parts are more awkward than heavy so more hands do help. Coarse threaded chipboard screws are all that's needed to fix the panels in place, these are then removed once the glue is dry.

I'm a big fan of 'dry' fitting, (assembling without gluing), this way you are sure that everything fits before gluing. Also parts can be glued one at a time, avoiding full disassembly of the entire module.

With an amount of forward thinking this type of construction can avoid not only excessive build hours but also un-necessary effort. It is an exciting and flexible medium to work with, not to mention also very forgiving, which makes this type of construction combined with the SAS build system very achievable for most DIY builders, even with limited skills. ❖

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