

Self-jigging shipkits cut costs and build time

For precision, self-jigging shipkits for all commercial and leisure craft over 7.5 metres call Corus, Europe's leading multi-metal supplier and processor. Our unrivalled material processing facilities, combined with the advanced computer modelling capabilities of a ship design specialist, enable us to supply bespoke kits which can significantly improve accuracy and quality, and reduce boat build times by as much as 50% compared with traditional construction methods.

Self-jigging shipkits ... the benefits at a glance

- Build times reduced by as much as 50% - related reduction in labour costs
- Ensures an error-free build and high, uniform standards of quality
- Eliminates material wastage
- Close tolerance laser or plasma cut components guarantee optimum accuracy
- No need for marking, cutting out and setting up parts
- Parts supplied fully developed with limber holes, stringers and slots
- Components cut and supplied to meet customers' build schedules

What are self-jigging shipkits?

The kit system follows the same principles as a model kit, enabling vessels to be constructed using pre-cut parts that can only interlock in the correct way. Each part is automatically marked with its own unique number so that its position in the vessel can be identified quickly and easily. As each piece locks into place the structure becomes self-supporting and the vessel becomes its own jig; hence the term 'self-jigging' shipkit.

At no stage during the build is it necessary to cut the pieces or refer to drawings; the vessel simply cannot be constructed in any way other than that intended by the designer. As a result, even relatively unskilled labour can produce high quality vessels, and build times are reduced substantially, particularly for repeat builds.

Sometimes, the self-jigging kit concept is confused with systems whereby the plate is simply supplied pre-cut. In these cases, the vessel still has to be built conventionally, with none of the benefits associated with a self-jigging system.



How are the kits produced?

Whilst the concept of self-jigging kits is simple, considerable expertise is required to produce a kit which fits together perfectly first-time. By working closely with the boat designer from an early stage, we can ensure the design incorporates as many self-jigging benefits as possible. At this stage, it is also possible to determine the build sequence and design the kit in line with the builder's capabilities (if one has been nominated), taking into account issues such as plate size, handling and line arc marking to maximise productivity during the build.

Each bespoke kit is generated by modelling the vessel's hull form and developing the internal structure as a series of individual inter-locking components. This means that the shape of the vessel can be guaranteed even though it is likely to be built from the centre out and the base up. The self-jigging features are then added and, finally, fixing details and service holes are agreed to suit the equipment installation. At every stage, the boat designer approves the kit features to ensure that his design is not compromised.

The CAD/CAM design data for the kit components is then downloaded to Corus. To optimise material utilisation and reduce wastage and costs, the parts are nested onto plates of the required grade and thickness using advanced software. The plates are then shot blasted and painted prior to profiling and marking on Corus's large bed plasma lines. On delivery of the kit a build manual is supplied for each client to ensure that the build phase can be easily managed.

In addition to profiling, Corus offers an extensive range of processing services including shotblasting and painting, press braking and drilling so that components can be supplied ready to assemble.

Why use self-jigging shipkits?

Everyone benefits: the client receives a high quality build on time and true to his original expectations; the builder has greater control over the build which can be completed in less man hours and with no material wastage; and the designer appreciates a system which reduces duplication and delivers a better product as this will ultimately carry his name.

Effectively, the risk and uncertainty of a conventional build are 'engineered' out of the equation. The financial considerations are highly significant, taking into account the improved project cashflow and revenue generation from a vessel delivered on time and to budget. By factoring in the increased flexibility from using relatively unskilled labour and the ability to build in a greater number of locations, there is a major commercial justification for using a self-jigging shipkit.

Further information

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