

# CONSTRUCTION TECHNIQUE

Hull, deck and interior components molded in Irwin White gel coat. Decks molded with contrasting non-skid pattern. Hull is foam cored above the waterline, to stiffen laminate and provide added insulation. Thru-bolted bronze seacocks on all thru-hulls below waterline.

Laminates are carefully scheduled, pattern cut and applied layers of gel coat, laminating polyester resins, glass mat and 24 oz. woven roving or biaxial glass fiber. Horizontal deck surfaces are cored for added stiffness and insulation. Hull-to-deck joint by deck overlap of interior hull flange with both chemical and mechanical bonding.

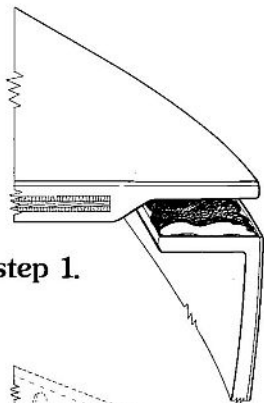
Structural strength and stiffness are a result of a fabricated grid and furniture base component which is bonded to the hull. Main bulkheads are fiberglass laced both sides to hull and deck with screws installed through the lacing. Main deck fittings are thru-bolted with aluminum backup plates. Shroud chainplates are spreadload design, laminated into the hull with unidirectional glass fiber.

All wood is sealed, interior teak is varnished, exterior teak is cleaned and sealed.

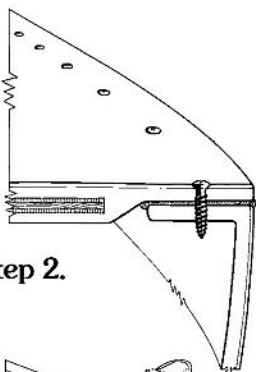
## HULL

- Hull and keel molded in one piece with integral deck flange
- Shoal draft keel (5'6"), with cast lead ballast secured and sealed inside molded fiberglass keel, double bottom effect. Adapt-A-Draft deep keel extension available \*

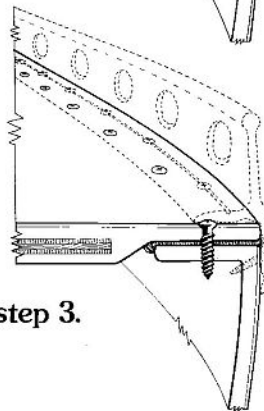
# IRWIN's Hull-to-Deck Joint



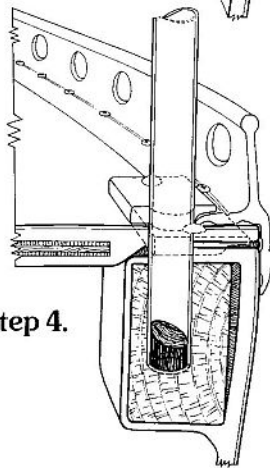
step 1.



step 2.



step 3.



step 4.

# DID YOU KNOW?

Did you know that the Irwin hull-to-deck joint is one of the strongest in the industry? Do you know the mechanics of this joint well enough to describe its advantages to an interested prospect? Did you know that there is more to the Irwin lifeline stanchion than meets the eye?

Let's shed some light on this hidden, yet none-the-less important, detail of Irwin construction. There are four basic steps in the fastening of the hull-to-deck joint. Each step reinforces the others and adds strength to the finished joint:

## Step One: CHEMICAL BONDING

The outer flange of the deck is mated to the return flange of the hull with polyester bonding putty, an extremely strong bonding agent that was selected for its compatibility with the polyester resin used in fiberglass. This chemical bond also waterproofs the joint.

## Step Two: MECHANICAL FASTENING

Mechanical fastening is accomplished by installation of stainless steel screws (#14x1 1/2") at 6" intervals around the entire deck. These screws penetrate through the deck flange and reverse flange on the hull. They are installed when the polyester bonding compound is still fresh, and the hardening of the chemical bond firmly secures the threads of these fasteners.

## Step Three: TOE RAIL INSTALLATION

On the Citation Series the toe rail is an aluminum extrusion that is screwed into place with #12x1" stainless steel screws, both on deck **through the hull-to-deck joint** and through the hull itself 1" below the sheer. This toe-rail installation strengthens the joint further by doubling the number of mechanical fasteners threaded through the flanges of the "L" shape of the extrusion which is secured to the hull on one side and through the flanges on the deck side. The Irwin Cruising Series are much the same, except that the cap rail is of teak. It is secured through the hull-to-deck joint with #14x2" screws at 8" intervals, bung-plugged with teak. Additional fasteners used to install the outboard genoa tracks also are threaded through the hull/deck flanges, further reinforcing the joint.



## Step Four: STANCHION INSTALLATION

The installation of lifeline stanchions is the final step in our hull-to-deck joint and further reinforces the bond. Rather than being flush-mounted on deck, our stanchions are equipped with a 4" long section of the tube below the deckplate.

We glass-in 2"x4" blocks along the sheer of the hull where the stanchions are to be mounted, and after the deck has been secured by the chemo-bonding and mechanical fastening, holes are drilled through the deck and into the wooden blocks. Polyester bonding putty is placed in this "socket" and the stanchion is then inserted and securely fastened by 2" long screws. These fasteners penetrate both the deck and the hull flange and into the wood stanchion block.

This installation technique makes our lifeline stanchions very solid and is far superior to conventional flush mounting. Even if through-bolted with backing plates a flushplate stanchion would not be this solid.

So there you have it, all the detailed and documented procedures that make the Irwin hull-to-deck joint better than the competition. It's just another example illustrating that "Design makes the Difference" also applies equally to the engineering design that is incorporated into every yacht we produce.

