

TECH-SHEET (WATKINS 27 CONSTRUCTION)

Material & Procedure subject to change

Hull Lamination: Application of laminants are done by hand and the use of mechanical operations.

1) Average layup order:

- A) Gelcoat surface
- B) $3/4$ oz. mat
- C) $1\frac{1}{2}$ oz. mat
- D) 1 - 24 oz. Woven Roven
- E) $1\frac{1}{2}$ oz. mat
- F) 1 - 24 oz. Woven Roven
- G) $1\frac{1}{2}$ oz. mat
- H) 1 - 24 oz. Woven Roven
- I) $1\frac{1}{2}$ oz. mat
- J) 24 oz. Woven Roven Stripping

This is the average procedure for lamination. A-G is the normal layup for the major hull with the additional H, I, & J at engine location.

Deck lamination: Application of laminants are done by hand and the use of mechanical operations.

1) Average layup order:

- A) Gelcoat surface
- B) $3/4$ oz. mat
- C) $1\frac{1}{2}$ oz. mat
- D) 1 - 24 oz. Woven Roven
- E) $1\frac{1}{2}$ oz. mat
- F) Stiffing & backup plate core
- G) $1\frac{1}{2}$ mat

Areas of stress have additional woven roven dependant upon calculated working pressures.

Deck Hulljoint: We are using a hat box style decking procedure. This procedure is where the deck flange slides over the hull. Stainless steel fastners and glass tape are used to secure this seam. A bonding material, such as 5200 Marine Seal, is used to seal this jointing area. The steering of the stainless steel fastners along this area is virtually impossible and has proven to be very reliable.

Head Liner: Application of laminants are done by hand and the use of mechanical operations.

1) Average layup order:

- A) Gelcoat surface
- B) 3/4 oz. mat
- C) 1 1/2 oz. mat
- D) 24 oz. Woven roven stripping
- E) Fiberglass bonding material used as filler between head liner and deck.

Inner Hull Liner: Application of laminants are done by hand and the use of mechanical operations.

1) Average layup order:

- A) Gelcoat surface
- B) 3/4 oz. mat
- C) 24 oz. woven roven
- D) 1 1/2 oz. mat
- E) 24 oz. woven roven stripping
- F) Stiffing and back up plate core

Stringers are run from seating to hull support, also in beam support in hanging locker and head areas.

Keel Structure: The Watkins ballast is interval lead. This lead is in the form of a solid unit which is casted to Watkins specifications. The lead is permanently bonded in the fiberglass keel structure. A sealed caping procedure covers this lead and also forms a drainage sump for the bilge pump.

Engine Installation & Rudder Installation:

I. Engines are supplied with a muffler and filters for fuel, air and water. Gate valves and shut-off valves are used for safety. Engine mounting bracket is directly secured to hull with use of various layers of roven woven. This adds strength and vibration absorption. Engine compartment has glassed bulkheads for noise insulation and added strength. Accessibility to engine is provided by removal of panels forward of the engine and to its side. Fuel cells are of aluminum construction and equipped with a fuel level gauge. These tanks hold approximately 20 gallons of fuel.

II. The Watkins rudder is a two piece fiberglass construction on the lower half. It has a flat channel welded to a stainless 1 1/2" shaft for support. The rudder post is supported internally by two collers and a support brace off the lower skeg. At the hull level or the mid-support location we use a stuffing box coupling to aid in longevity and lubrication control.

Mast Support and Chainplates: By carrying a large beam, we were able to support our mast directly over it's compression pole. This compression pole is located in the head area. The compression strut is a corss laminated structure.

All chainplates are physically bolted through the hull and deck on Watkins 27's. This procedure allows on the spot inspection of fastners and is easily serviceable. The chain plate strut is made of a high intensity alloy. By the use of these struts, the owner of Watkins 27's will benefit form these features:

- A) Easy accessibility
- B) Triangular support of deck
- C) Load distribution between hull and deck
- D) Lack of dry rotting of conventional wood structures
- E) Peace of mind in heavy weather

Stem head and backstay straps are bolted through the deck as well as hull.

Rigging & Mast: All masts and booms are of a high grade marine aluminum. The Watkins 27 mast and boom also have an anodized finish for extra protection against corrosion.

Halyards: Halyards are run externally for trouble free operation. Halyards are constructed of marine wire with dacron tails. There are stainless thimble to rope splices at their joining. Halyard shackles for both the jib and main halyards are provided with each set.

Lighting: A twenty point lite is provided on each mast. It is wired internally and exits just above the mast step.

Masthead: Shives in this mast head are grooved to accommodate the stainless wire halyard. A divider plate insures that halyards can not be crossed. The mast head can be completely disassembled for maintenance or its removal for additional wiring.

Gooseneck: A stainless steel gooseneck of the fixed variety is the attaching point for the boom.

Boom: We are using a very advanced boom for this size boat. It is constructed of a high strength anodized aluminum. This boom features an internal double purchase outhaul and internal jiffing reefing. Boom vang bails and mainsheet bails of high strength stainless.

Rigging: All rigging is of an high grade stainless cable. The cable to turnbuckle and eye fitting are rotary swedged. Rotary swedging adds the safety to rigging strength by eliminating grooving formed by roller swedging cable to fitting hardware. Forestay and backstay are constructed of $\frac{1}{4}$ " diameter cable. Turnbuckles are open bodied screws with carter pin lock. Uppers and split lowers are constructed of $\frac{3}{16}$ " cable.