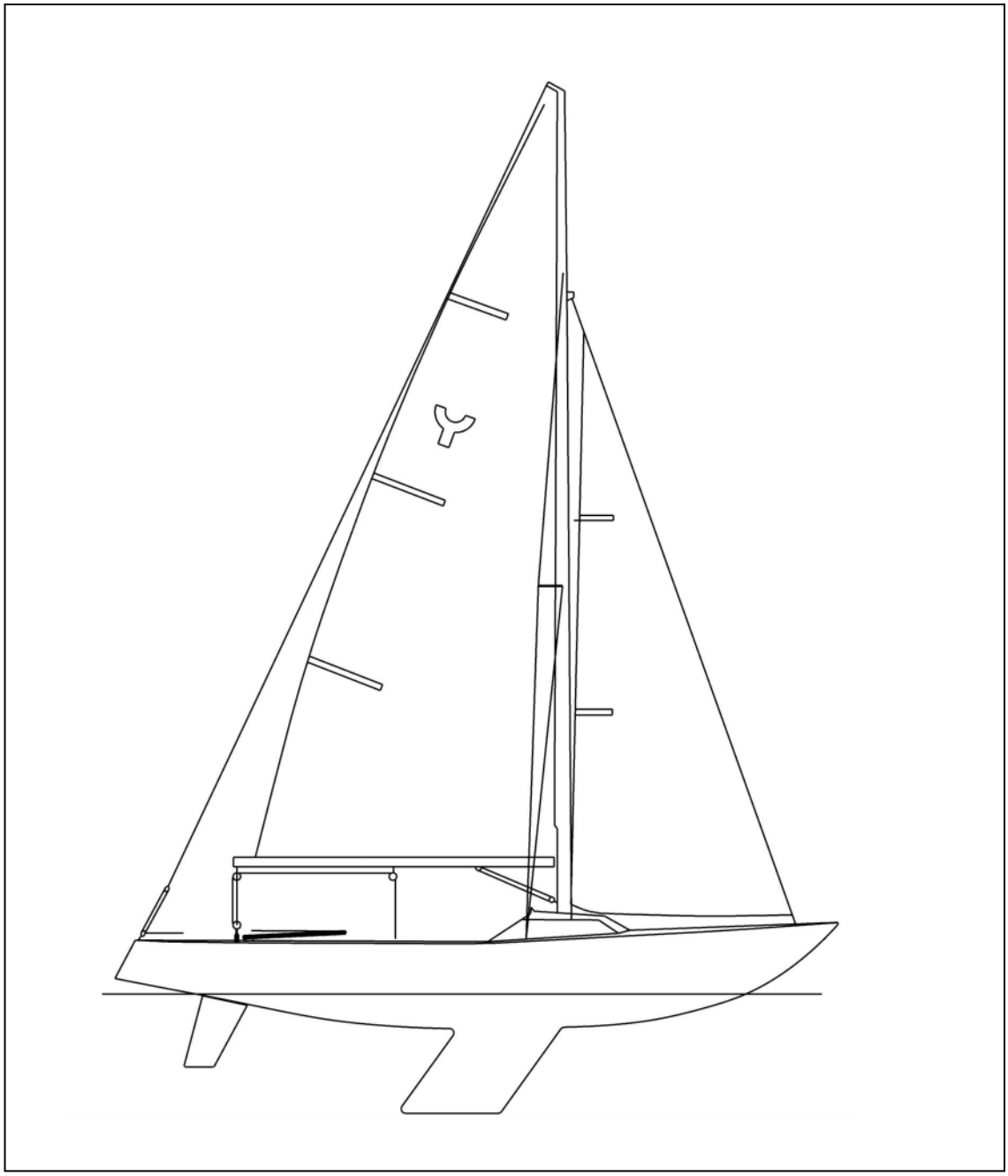
INTERNATIONAL
YNGLING
CONSTRUCTION MANUAL
2005

I S A F



Boats must be built by builders licensed by ISAF, in accordance with the following documents:

The Licence Agreement between ISAF and the Builder
The Class Rules, which include the Measurement Diagram and the Measurement Form
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This Construction Manual
The Class Drawings produced by the designer, Jan Linge, as follows:

Drawing 1	Lines Plan, for reference only	Annotated No Alterations per May 2001
Drawing 2	Keel Pattern, see below	Annotated No Alterations per May 2001
Drawing 3	General Assembly	Annotated No Alterations per May 2001
Drawing 4	Not used	
Drawing 5	Hull Construction Plan	Rev May 2001
Drawing 6	Deck Construction Plan	Rev May 2001
Drawing 7	Not Used	
Drawing 8	Raised Floor Watertight Double Bottom	Rev May 2001

Note that in any detail where there is thought to be ambiguity between the Drawings, this Construction Manual and the Class Rules, the Class Rules shall prevail.

FLOOR CONSTRUCTION

The hull may be built with either the Raised Floor Watertight Double Bottom shown in Drawing 8 or with a lower wooden floor of plywood or hardwood not less than 10mm thick fitted directly to the moulded in floor members. The shape of the floorboards and the method of fixing is optional.

MATERIALS

The materials to be used in the construction of the boat are specified on the drawings or in the Class Rules. The boat is intended to be constructed of common materials, for example glass fibre and polyester resins.

TOOLING

Builders must use the Official ISAF Standard Tooling supplied Jan Linge AS. As follows.

Hull Mould
Deck Mould
Double Bottom Moulds, in two halves
Mast Beam Mould
Keel Casting Pattern

The above tooling may not be altered in any way without the written authority of ISAF

Rudder Moulds, in two halves, are also supplied. The use of these moulds is optional.

In addition, Jan Linge supplies drawings for additional moulds and tools that the builder must make himself. These are the Hull/Deck assembly jig, which is obligatory, and moulds for the Floor Members and Deck Beams, which are advisory.

SEQUENCE OF CONSTRUCTION

HULL

Lay up hull laminates in mould, in accordance with Drawing 5, including the incorporation of the Floor Members. The hull laminates must carry over on to the top flange of hull mould. The inner surface must be topcoated with gelcoat all over, except areas shown on Drawing 5. The top coat may be applied at any stage of the of the assembly of the hull, deck and internal components.

Remove hull from mould, trim top edge all round level with or below the upper surface of the flange on the Hull Mould, such that the finished sheer height of the boat complies with the Class Rules and Measurement Diagram.

DECK

Lay up deck laminates in Mould in accordance with Drawing 6, incorporating the deck beams and mast support beam.

Topcoat all over inner surface, except areas to be subsequently bonded. Note the topcoat may be applied after the hull/deck assembly is complete.

HULL/DECK ASSEMBLY

Assemble hull to deck in the hull/deck assembly jig. Laminate over the inside of the hull/deck joint.

Insert Fore and Aft Bulkheads

Insert Raised Floor mouldings, if required, or the floor-board structure.

Insert Knees.

Insert Rudder Tube

Mould in Shroud Chainplates, Deck Fittings.

FINAL ASSEMBLY

Attach Keel,

Attach all fittings.

Mark the **Section Template Reference Points** for positioning the 4 section templates on the external hull entreline and the deck flange in accordance with the Measurement Diagram Appendix 3A. The point shall consist of a 2.5mm diameter hole approximately 2mm deep drilled at the centre of the measurement mark and filled with a material of contrasting colour. Note the Section Template Reference Points positioned as above may not coincide with the scribe lines in the hull and deck moulds and the template positions shown on earlier versions of the Measurement Diagram. The new method of positioning the templates over-rides the earlier methods.

HULL WEIGHT AND C.G. CHECKS.

The weight of the bare assembled hull and deck, including the fore and aft bulkheads, without hatch covers, moulded in parts of the forestay fittings, shroud attachment fittings and rudder stock bearings, but excluding all other fittings, shall not be less than 200kg.

The position of the centre of gravity of the hull and deck in the condition specified above shall not be lower than that at which the hull would balance on its side when heeled to 110 degrees.

KEEL

The keel shall be of cast iron, cast from an official ISAF Pattern.

The weight of the keel, excluding any coating, shall be 310kg plus/minus 5 kg. The shortest distance from the centre of gravity of the keel to the top of the flange shall not be more than 500mm.

The keel may be galvanized and/or covered by any material.

The keel shall be fastened to the hull by not less than eight stainless steel threaded studs and threads of minimum diameter 11mm. The bolts at the forward and aft end of the keel shall be on the entreline, the remainder shall be staggered. The length of the studs shall be such that not less than 15mm of thread protrudes above the nuts so that the hull lifting eye and a Gyradius Rig may be attached above the nuts.

The keel may be coated with any non-metallic material and be faired and polished provided the finished keel complies with the Class Rules and Measurement Diagram

RUDDER

The rudder may be moulded in the Official Moulds or in moulds manufactured by the Licensed Builder, provided the finished rudder complies with the Class Rules and Measurement Diagram. The construction is optional, the laminate spec stated on Drawing 5 being advisory. The blade materials shall be glass fibre, polyester resin and foam.

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