International One-Design

Class Equipment Rules

The International One-Design was commissioned by Cornelius Shields & designed by Bjarne Aas in 1936.

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INTRODUCTION

The International One-Design (IOD) Class was conceived to build, maintain and race a fleet of "One-Design Yachts, distinctive in appearance and performance, using one-design racing, and especially to develop the competitive capacities of both helmsmen and crews under the fairest and most equal conditions."

The design of the International One-Design was inspired by a Six Metre created by the famous Norwegian naval architect and builder Bjarne Aas, in 1935. Cornelius Shields, Sr., impressed by her beauty and handling qualities, initiated action for an entire Class similar in design and appearance, but with a loftier rig and a short shelter and storage cabin. Aas submitted plans and specifications in 1936 and a syndicate was formed.

In late 1936, twenty-five International One-Designs yachts were delivered from Norway and commenced racing on Long Island Sound. Since that time, other fleets have formed in Norway, the UK, Bermuda, Canada and the United States. With 12 fleets in 5 countries and over 150 yachts actively racing, the International One Design was the first class to be recognized by ISAF as a "Classic" One Design Class.

2011 marked the 75th anniversary of the International One Design Class. This introduction only provides an informal background and the International One Design Class Rules proper begin on the next page.

IOD rigs and sails are measurement controlled. IOD hulls and hull appendages are measurement controlled, unless built with class-owned or class-approved molds.

IOD hulls, hull appendages, shall only be manufactured by class-approved builders – in the Class Equipment Rules referred to as approved builders..

Owners and crews should be aware that compliance with rules in Section B is not checked as part of the certification process. Rules regulating the conditions for racing are contained in Section B of these class rules, in Equipment Rules of Sailing Part I and in the Racing Rules of Sailing.

These are open class rules where if it does not specifically say that you shall not – then you may. Components and use are defined by their description.

PART I - ADMINISTRATION

Section A - General

A.1 LANGUAGE

A.1.1 The official language of the class is English and in case of dispute over translation the English text shall prevail.

A.1.2 The word "shall" is mandatory and the word "may" is permissive.

A.1.3 Except where used in headings, when a term is printed in "**bold**" the definition in the ERS applies and when a term is printed in "*italics*" the definition in the RRS applies.

A.2 ABBREVIATIONS

A.2.1 ISAF International Sailing Federation

MNA ISAF Member National Authority

IODWCA International One Design World Class Association

LFA Local Fleet Association

ERS Equipment Rules of Sailing

RRS Racing Rules of Sailing

A.3 AUTHORITIES

A.3.1 The international authority of the class is the IODWCA which shall preside over all matters concerning these **class rules**.

A.3.2 The **certification authority** is the IODWCA Executive Committee.

A.3.3 Notwithstanding anything contained herein, the **certification authority** has the authority to withdraw a **certificate**.

A.4 ADMINISTRATION OF THE CLASS

A.4.1 The IODWCA shall oversee all administrative functions of the class in accordance with the IODWCA Constitution and By-Laws.

A.5 ISAF RULES

A.5.1 The ISAF Equipment Rules of Sailing (ERS) apply, except as varied by these **class rules**.

A.6 CLASS RULE AMENDMENTS

A.6.1 Any amendments to these rules must be recommended by a majority of the IODWCA Technical Committee and approved by a two-thirds majority of the IODWCA Executive Committee.

A.6.2 Any approved amendment shall not take effect until the beginning of the following calendar year.

A.7 CLASS RULE INTERPRETATION

A.7.1 Interpretation of **class rules** shall be made by the IODWCA in accordance with the ISAF Regulations.

A.8 INTERNATIONAL CLASS FEE, CLASSS ROYALTY

A.8.1 Approved **hull** builder shall pay the International Class Fee.

A.8.2 New **boats** shall be required to pay a Royalty Fee to the IODWCA in accordance with the Schedule of Fees.

A.9 SAIL NUMBERS

A.9.1 **Sail** numbers shall be issued by the LFA. Numbers need not be consecutive.

A.10 HULL CERTIFICATION

A.10.1 A **certificate** shall record the following information:

A. Class

B. **Certification Authority**

C. Sail number issued by the LFA

D. Owner

E. Hull identification

F. Builder/Manufacturers details

G. Date of issue of initial **certificate**

H. Date of issue of **certificate**

A.11 INITIAL HULL CERTIFICATION

A.11.1 For a **certificate** to be issued to hull not previously **certified**:

A. **Certification control** shall be carried out by the **official measurer** who shall complete the appropriate documentation.

B. The documentation and **certification** fee, if required, shall be sent to the **certification authority**.

C. Upon receipt of a satisfactorily completed documentation and **certification** fee, if required, the **certification authority** may issue a **certificate**.

A.11.2 Hulls must be built by IODWCA-approved builders. Interested builders may apply to the IODWCA for designation as an Approved Builder. Approved commercial builders are as follows (active builders are underlined):

1936 -1967, Wood, A.S. Bjarne Aas Yacht Verft, Ltd.

1968-1973, Fiberglass, A.S. Bjarne Aas Yacht Verft, Ltd.

1974-1976, Fiberglass, Henrik Aas

1976-1979, Fiberglass, Harry Farmer

1980-1988, Fiberglass, Able Marine, Southwest Harbor ME & Bermuda IOD Company, Ltd.

1990-1994, Fiberglass, Silvers Marine, Ltd., Rosneath, Scotland

1990-1995, Fiberglass, Offshore Glass Co. Portland, ME

1997-2005, Fiberglass, C. W. Hood Yachts, Marblehead, MA

1996-Present Fiberglass, Tjorns Yacht Service, Tonsborg, Sweden

2006-2012, Fiberglass, Shaw Yachts, Rockland, ME

2009-Present Wood, Tern Boatworks, Chester Basin, NS, Canada

A.12 VALIDITY OF CERTIFICATE

A.12.1 A hull **certificate** becomes invalid upon:

A. the change to any items recorded on the hull **certificate** as required under A.10.

B. the date of expiry,

C. withdrawal by the **certification authority**,

D. the issue of a new certificate.

A.13 HULL RE-CERTIFICATION

A.13.1 The **certification authority** may issue a **certificate** to a previously certified **hull**:

A. when it is invalidated under A.12.1(a) or (b), after receipt of the old **certificate**, and **certification** fee if required.

B. when it is invalidated under A.12.1 (c), at its discretion.

C. in other cases, by application of the procedure in A.11.

A.14 RETENTION OF CERTIFICATION DOCUMENTATION

A.14.1 The **certification authority** shall:

A. retain the original documentation upon which the current certificate is based.

A.15 APPLICATION/IMPLEMENTATION

A.15.1 For a boat to be eligible for racing, it shall comply with the rules in this Section.

A.15.2 Unless significantly altered after May 1, 2014, the hulls of all yachts constructed prior to that date need not comply with Section C.2 of these rules.

A.15.3 Substantial renovations or reconstructions after January 1, 2015 shall be allowed to recreate documented original conditions, but otherwise shall comply with these rules.

A.15.4 Questions regarding compliance shall be made in writing to the IODWCA Technical Committee.

A.16 LOCAL FLEET RULES

A.16.1 Individual fleets must request permission from the IODWCA for any changes to the Class Rules. The IODWCA may grant fleet-specific amendments to these rules for local or historical conditions that warrant exception in accordance with the procedures in Section A.6. Fleet-specific amendments to these rules are listed below by Fleet.

A. Long Island Sound Fleet (LIS) established 1937

1. All **boats** in the LIS Fleet shall use the Modern **Rig**.

B. Northeast Harbor Fleet (NEH) established 1938

1. **Mast**s in the NEH Fleet shall be made of wood to NEH's construction plan, Appendix H.

C. Bermuda Fleet (BDA) established 1937

1. All **boats** in the BDA Fleet shall use the Modern **Rig**.

D. Marblehead Fleet (MHD) established 1938

1. All **boats** in the MHD Fleet shall use the Classic **Rig**.

E. San Francisco Fleet (SFO) established 1952

1. All **boats** in the SFO Fleet shall use the Classic **Rig**.

F. Swedish Fleet (SWE) established 1976

1. **Boats** in the SWE Fleet shall use either the Modern or Classic **Rig**.

G. Oslo Inner Fjord Fleet (OIF) established 1939

1. **Boats** in the OIF Fleet shall use either the Modern or Classic **Rig**.

H. Oslo Outer Fjord Fleet (OOF) established 1937

1. All **boats** in the OOF Fleet shall use either the Modern or Classic **Rig**.

I. Fishers Island Fleet (FIS) established 1988

1. All **boats** in the FIS Fleet shall use the Classic **Rig**.

J. Nantucket Fleet (NKT) established 1997

1. All **boats** in the NKT Fleet shall use the Classic **Rig**.

K. Falmouth Fleet (FAL) established 2007

1. All **boats** in the FAL Fleet shall use the Modern **Rig**.

L. Chester Fleet (CHE) established 2009

1. All **boats** in the CHE Fleet shall use the Modern **Rig**.

A.17 LIST OF PLANS:

I Rigging Plan, by Bjarne Aas, May, 1936

II Working Plan, by Bjarne Aas, June, 1936 edited by R. Meslie, Oct 1, 1963

III Long Cabin, by Bjarne Aas, June 1936

IV Fiberglass, by Henrik Aas, September, 1972

V Sail Plan, by Bjarne Aas, 1936

VI Lines, by Bjarne Aas, June, 1936

VII Diagonal Scheme, by Bjarne Aas, July, 1936

VIII Table of Offsets, by Bjarne Aas, July, 1936

IX Lead Keel, by Bjarne Aas, June 23, 1936

X Rudder, by Bjarne Aas, June, 1936 edited by R.W. Homer, Oct 1, 2001

XI Wooden Spars, by Bjarne Aas, June, 1936

XII Classic Spars, by IOD Class, June, 2011

XIII Modern Spars, by IOD Class, June, 2011

XIV Class Logo & Sail Insignia, January 2014

PART II - REQUIREMENTS & LIMITATIONS

Section B - Conditions for Racing

B.1 PERSONAL EQUIPMENT

B.1.1 Hatch covers and cabin doors may be removed from the **yacht** for *racing*.

B.1.2 Electronic compasses, whether installed or hand held, unless allowed by the LFA are prohibited from use during all IODWCA Inter-Fleet competitions.

B.1.3 Performance instruments and systems, whether installed or hand held, are prohibited from use during all IODWCA Inter-Fleet competitions, except that,

A. Electronic watches and stopwatches are permitted.

B.1.4 Electronic communications systems, whether installed or hand held, are prohibited from use during all IODWCA Inter-Fleet competitions, except that,

A. VHF radios are permitted for authorized transmissions if specified in the *Sailing Instructions*.

B.2 PORTABLE EQUIPMENT

B.2.1 **Yachts** may install a head.

B.2.2 **Yachts** may carry an outboard motor with a maximum weight of 77 pounds (35 kg).

A. **Yachts** may carry a fuel container whose full weight shall not to exceed 66 pounds (30 kg).

B.3 RIG

B.3.1 Movement of the **mast** in the step or at the **partners** while *racing* is not permitted.

B.4 SAILS

B.4.1 The **sail** inventory shall comply with the requirements of the LFA sail purchase plan.

B.5 SAFETY EQUIPMENT

B.5.1 All **boats** must comply with the specific safety equipment requirements of the local jurisdiction while *racing*, however, at a minimum each **boat** must carry the following:

A. Paddle.

B. 2.5 gal bucket.

C. Bilge pump

D. Fog horn.

E. First aid kit.

Section C - Hull

C.1 GENERAL

C.1.1 Hull Construction

A. Wooden **hulls** shall be in general accordance with Plans I, II, III, VI, VIII, & IX above, as amended by these rules.

B. Fiberglass **hulls** shall be in general accordance with Plans I, IV, VI, VIII, & IX above, as amended by these rules.

C. Other methods & materials may be used for construction, provided they are compatible with the weights and measures applicable to these one-design standards and the IOD yacht specifications and approved by the IODWCA in writing.

D. No material may be added to or removed from **hull** or **deck** other than routine sanding and painting as provided for under C.8 Reconstruction.

C.2 HULL SHELL

C.2.1 Hull Measurement

A. Principal Dimensions

1.	Length	33’-5 3/16” (10190mm)
2.	LWL	21’-5” (6528mm)
3.	Beam	6’-9 5/16” (2066mm)
4.	Draft	5’-2” (1575mm)
5.	Displacement	7,200 lbs (3266 kg)
6.	Sail Area	390 sf (36 sqm)

C.2.2 Fore-Aft Datum

A. The fore & aft measurement **datum** shall be the plane described as Station 10.

1. On wooden **boats**, Station 10 is the plane defined by the aft edge of the large frame near the front of the cabin house, or the front of the cabin house, if aligned with the aft edge of that station frame.

2. On fiberglass **boats**, Station 10 is the plane perpendicular to the **centerline** a distance from the **transom** either the fixed distance of 20’-2 ½” (6160mm) forward of the **transom**, or 60.4% of the overall length of the **boat** from the **transom**.

3. If it can be shown that Station 10 is located in some other plane, by laser measurement or other similar means, and accepted by the Class Measurer, then that **datum point** should be marked accordingly.

C.2.3 Methodology

A. Station Interval is 1’-11 5/8” (600mm).

B. Establish the following fore/aft reference points by locating points permanently at 3” (76mm) from edge of deck, 3” (76mm) below **shear** and approximately 3” (76mm) above **waterline**, This can be done with screws in wooden boats or dimples in fiberglass boats.

(a) Station 2

(b) Station 10

(c) Station 14

C. Level **boat** athwartships

D. Level **boat** fore/aft so that,

1. The difference between the **shear** heights at Station 2 and Station 14 is 7" (179mm).

2. The difference in height along the **centerline** between the **bow** and **transom** is 10 1/8" (256mm).

E. Stations shall conform to Plan VII, but tolerances shall not exceed the following at each station:

Station 2	± 1/2" (13mm)
Station 4	± 5/8" (16mm)
Station 6	± 5/8" (16mm)
Station 8	± 3/4" (19mm)
Station 10	± 5/8" (16mm)
Station 12	± 5/8" (16mm)
Station 14	± 1/2" (13mm)

C.2.4 Hull Weight

A. The **weight** of a **yacht** fully rigged is 7,120 lbs (3230 kg), plus or minus two (±2%) percent.

B. The **hull shell weight** is 2,800 lbs (1270 kg), plus or minus two (± 2%) percent.

C. Corrector weights

1. **Corrector weights** shall be permanently fixed in place.

2. A maximum of 200 lbs (90.72 kg) may be added between the lifting eye and the front of the **mast step**.

3. The remaining **corrector weight** must be distributed evenly throughout the boat as directed by the technical committee or as follows: 1/3 aft of Station 3, 1/3 between Stations 8 and 10 attached to the cockpit sole or higher and 1/3 forward of Station 14.

C.3 DECK

C.3.1 General

A. The **deck** shall be in general accordance with Plans I, II, III or IV.

C.3.2 Material

A. The **deck** may be rebuilt in 5/8" (16mm) T&G pine or in ½" (13mm) marine plywood with a minimum weight of 1.56 lbs./sq. ft.

1. Additionally, a wood **deck** may be fiber-glassed.

B. The **deck** may be foam-cored fiberglass built to the class-approved laminate schedule.

C.3.3 Partners

A. The **forward limit** of the **partner opening** can be no further forward than 18" (457mm) in front of Station 10.

B. The **aft limit** of the **partner opening** can be no further aft than 9" (229mm) in front of Station 10.

C.3.4 Headstay

A. The **headstay point** shall be a maximum of 9'-7 ¾" (2940mm) forward of Station 10.

C.3.5 Backstay

A. The **backstay point** shall be a maximum of 18'-9" (5715mm) aft of Station 10.

C.3.6 Chain Plates

A. The chain plates shall be of optional design.

B. On wooden boats there shall be a minimum of three tabs at each side.

C.4 CABIN

C.4.1 General

A. **Yachts** may use either the original long cabin or short cabin.

1. The short cabin shall be in general accordance with Plans II or IV.

2. The long cabin shall be in general accordance with Plans I or III.

C.4.2 Dimensions

A. Cabin Length

1. Short Cabins: The length of the cabin is 4'-1 ½" (1257mm).

2. The forward face of the **bulkhead** on Plan II is at Station 8, two rib positions forward of the original 1936 design. Shortening of the cabin beyond this point is not allowed.

3. Long Cabins: The length of the cabin is 5'-5 ¼" (1657mm).

B. Cabin Width

1. Forward end

(a) The forward end of the cabin is 2'-6" (762mm) wide.

2. Aft end

(a) Short Cabins: The aft end of the cabin is 4'-1 ½" (1257mm) wide.

(b) Long Cabins: The aft end of the cabin is 4'-2 ¾" (1289mm) wide.

C. Cabin Height

1. The height of the cabin front at **centerline** is 7 ¾" (197mm).

D. Cabin Hatch

1. The dimensions of the cabin top hatch opening are 20" (508mm) wide and 23" (584mm) long plus or minus 4" (100mm).

C.4.3 Materials

A. The cabin roof shall be a minimum of ½" (13mm) T&G white pine or not less than 3/8" (10mm) marine plywood.

B. The cabin **bulkhead** may be moved or replaced with 5/8" (16mm) teak or mahogany or ½" (13mm) marine plywood.

C. Cabins may be built in fiberglass according to the class-approved laminate schedule.

C.4.4 Seats

A. Cabin seats or bunks may be of optional design but must exist in approximately the locations shown on the Plans II, III or IV.

B. Total seating surface area must be at least 8 sq ft (.74sm).

C.5 COCKPIT

C.5.1 General

A. The cockpit shall be in general accordance with Plans II, III or IV.

C.5.2 Dimensions

A. Short Cabins: The cockpit length is 8'-6" (2591mm).

B. Long Cabins: The cockpit length is 7'-2 ¼"" (2191mm).

C.5.3 Seats

A. Cockpit seats may be of optional design but must exist.

B. Total potential seating area between the cockpit coamings must be at least 300 sq in (.194 sq m).

C. Design thickness of the surface is 19/32" (15mm).

D. Minimum thickness should be maintained at not less than ½" (13mm).

C.5.4 Coamings

A. Thickness

1. Cockpit Coamings have a design thickness of 11/16" (17mm).

2. Coamings may be rebuilt with not less than 5/8" (16mm) mahogany or teak.

B. Length

1. Short Cabins: The length of the coamings from the cabin bulkhead @ Station 8 is 13'-1" (3988mm).

2. Long Cabins: The length of the coamings from the cabin bulkhead is 11'-9 ¼" (3588mm).

C. Height

1. Minimum coaming heights above the deck on all boats are as follows:

(a) 6" (152mm) at the cabin bulkhead.

(b) 4 ½" (114mm) at the midpoint

(c) 3" (76mm) at the after end of the cockpit.

C.6 BULKHEADS

C.6.1 The cabin **bulkhead** may be moved or replaced with 5/8" (16mm) teak or mahogany or ½" (13mm) marine plywood.

C.6.2 The **bulkhead** on Plan II is two rib positions forward of the original 1936 design Plan III. Shortening of the cabin beyond this point is not allowed.

C.7 MAST STEP

C.7.1 The **forward limit** of the **mast** butt is 1'-7 ½" (457mm) forward of Station 10.

C.7.2 The **aft limit** of the **mast** butt is 10 ½" (229mm) forward of Station 10.

C.7.3 The **mast** step may be level up to the design **waterline**.

C.8 RECONSTRUCTION

C.8.1 Any reconstruction shall maintain the weight and balance of the original **yacht**. Efforts to alter the performance characteristics of the **yacht** by altering the weight distribution of the original design is not allowed.

C.8.2 The cabin **bulkhead** may be moved or replaced with 5/8" (16mm) teak or mahogany or ½" (13mm) marine plywood. The **bulkhead** on the Plan II is two rib positions forward of the original 1936 design Plan III. Shortening of the cabin beyond this point is not allowed.

C.8.3 Fiber-glassing of the **hull** is allowed. Design thickness of the **hull** is ¾" (19mm). Preparation of the wooden surface should involve rough sanding but sandblasting may be utilized, in either case maintain a minimum wood thickness of 5/8" (16mm).

Section D - Hull Appendages

D.1 KEEL

D.1.1 General

A. The keel shall be in accordance with Plans I, II, IV, VI, and X.

D.1.2 Material

A. The keel shall be made of lead.

D.1.3 Weight

A. The lead keel shall weigh 4,100 lbs (1860 kg), plus or minus two (± 2%) percent.

D.2 RUDDER, STOCK & TILLER

D.2.1 Rudder

A. General

1. The **rudder** shall be in general accordance with Plans I, II, IV, VI, and VII.

2. At least one 2" (51mm) wide metal strap, approximately mid -way up the **rudder** post, shall be attached to the hull to support the leading edge of the **rudder**.

3. No fairwaters may be installed where the **rudder** meets the hull.

4. The addition of a **rudder** heel pintel is allowed.

B. Material

1. The **rudder** shall be made of either solid mahogany or cored fiberglass.

2. The **rudder** shall be 1 1/2" dia stainless steel or bronze.

C. Weight

1. The **rudder** including stock shall weigh a minimum of 65 lbs (29.48 kg).

D. Dimensions

1. The leading edge of the **rudder** shall be radiused and have a minimum diameter of 1 ½" (38mm).

2. The trailing edge of the **rudder** shall be radiused and have a minimum diameter of ½" (13mm).

D.2.2 Tiller

A. Tillers are required, but may be of optional design.

Section E - Rig

E.1 GENERAL

A. There are two class-approved **rig** configurations, the Classic **rig** and the Modern **rig**.

1. The Classic **rig** is the original 1937 configuration. It is a double **spreader** ¾ **rig** with an upper diamond and jumpers. Measurement information for this **rig** follows.

2. The Modern **rig** was developed in the 1970s and is sometimes referred to as the Long Island Sound **rig**. It is a single **spreader** 7/8 **rig** with jumpers and no upper diamond. Measurement information for the Modern **rig** is found in Section G of these **rules**.

B. The LFA must specify which configuration(s) are permitted to race within that Fleet.

C. **Mast**s shall be made of a single material, fasteners, fittings, **corrector weights** and adhesives excluded. Approved materials are wood, aluminum, or carbon fiber.

E.2 MAST

E.2.1 Measurement Points

A. **Datum** - The **datum point** should be 2'-8 7/8" (835mm) above the **deck** and is limited to plus or minus 3/8" (10mm).

1. All vertical **mast** dimensions are measured to this **datum point**.

2. The **datum point** shall be permanently etched into the surface of the **mast**.

B. **Top Point** - The **top point** shall be a maximum of 39'-5" (12014mm), above the **datum**.

C. **Heel Point** - The **heel point** can vary but shall be a minimum of 5'-2" (1575mm) below the **datum**.

D. **The upper limit point** shall be 38'-10" (11836mm), above the **datum**.

E. **The lower limit point** is the **datum**.

F. Mast Bands

1. The distance between the **lower mast band** and the **upper mast band** shall not exceed 38'-10" (11836mm).

E.2.2 Weight

A. The **mast weight** shall be a minimum of 200 lbs (90.7kg).

B. The **mast center of gravity** shall be a minimum of 14'-4 1/8" (4372mm) above the **datum point**.

E.2.3 Section

A. Fore-aft dimension

1. The typical **fore-aft dimension** of the **mast section** shall be a minimum of 5 5/8" (143mm) and a maximum of 6 ¼" (159mm).

2. The **fore-aft dimension** of the **mast section** at the top of the **taper** shall be a minimum of 3 7/8" (98mm) and a maximum of 4 1/8" (105mm).

3. The **fore-aft dimension** of the **mast section** at the top of the **taper** on wood **mast**s shall be a minimum of 4 3/8" (111mm).

B. Transverse dimension

1. The typical transverse dimension of the **mast section** shall be a minimum of 3 7/8" (98mm) and a maximum of 4 1/8" (105mm).

2. The transverse dimension of the **mast section** at the top of the **taper** shall be a minimum of 3 7/8" (98mm).

3. The transverse dimension of the **mast section** at the top of the taper on wood **mast**s shall be 2 ¼" (57mm).

E.2.4 Taper

A. The **mast taper** shall not begin below the **forestay height**.

B. Wood **mast**s shall conform to the Plan IX Wooden **Spar**s.

1. **Taper** begins at 9'-4 13/16" (2865mm) above **mast datum**.

E.2.5 Spreaders

A. Lower spreaders

1. The **lower spreader length** is 3'-4" (1016mm) with a minimum of 3'-3" (991mm) and a maximum of 3'-5" (1041mm).

2. The **lower spreader height** is 13'-6 9/16" (4129mm) with a minimum of 13'-6 1/16" (4116mm) and a maximum of 14'-0 1/16" (4269mm).

B. Diamond spreaders

1. The **diamond spreader length** is 2'-4" (711mm) with a minimum of 2'-0" (610mm) and a maximum of 2'-5" (737mm).

2. The **diamond spreader height** is 27'-2 ¾" (8300mm) with a minimum of 26'-10 5/16" (8186mm) and a maximum of 27'-3 5/16" (8313mm).

C. Jumper spreader

1. The **jumper spreader length** is 2'-0" (610mm) with a minimum of 1'-11" (584mm) and a maximum of 2'-1" (635mm).

2. The **jumper spreader separation** is 2'-0" (610mm) with a minimum of 2'-0" (61mm) and a maximum of 2'-6" (762mm).

3. The **jumper spreader height** is 27'-7 ¾" (8426mm) with a minimum of 27'-7 ¼" (8413mm) and a maximum of 28'-1 11/16" (8578mm).

E.2.6 Mast Crane

A. The **mast** crane length is 6" (152mm) with a minimum of 6" (152mm) and a maximum of 8" (203mm).

E.2.7 Halyards

A. Main Halyard

1. The maximum **main halyard height** shall be 38'- 5" (11709mm).

B. Jib Halyard

1. The **jib halyard height** shall be less than the **forestay height**.

C. Spinnaker Halyard

1. The **spinnaker halyard height** is 27'-6 ¼" (8388mm) with a minimum of 26'-10 ¼" (8185mm) and a maximum of 27'-6 ¼" (8388mm).

E.3 BOOM

E.3.1 General

A. The **boom** shall be made of a single material, fasteners, fittings, **corrector weights** and adhesives excluded. Approved materials are wood, aluminum, and carbon fiber.

E.3.2 Measurement Points

A. The **outer point** distance shall be a max of 16'-2" (4928mm).

E.3.3 Weight

A. The minimum **boom weight** shall be 40 lbs (18.1kg).

B. The **center of gravity** of the **boom** shall be a minimum of 8'-0" (2438mm) from the aft edge of the **mast**.

E.3.4 Section

A. The minimum vertical dimension of the **boom section** shall be 4 ½" (114mm).

B. The minimum transverse dimension of the **boom section** shall be 2 ¾" (70mm).

E.4 SPINNAKER POLE

E.4.1 Spinnaker Pole - General

A. The **spinnaker pole** shall be made of a single material, fasteners, fittings, **corrector weights** and adhesives excluded. Approved materials are wood aluminum, and carbon fiber.

E.4.2 Length

A. The maximum **spinnaker pole length** shall be 8'-5" (2565mm).

E.4.3 Weight

A. The minimum **spinnaker pole weight** shall be 8 lbs (3.6kg).

B. The **center of gravity** of the **spinnaker pole** shall be approximately equidistant from each end.

E.4.4 Section

A. The minimum cross-sectional dimension of the **spinnaker pole** shall be 2 ¼" (57mm).

E.5 STANDING RIGGING

E.5.1 General

A. The measurement information that follows is for **yachts** rigged with Classic **spars**.

B. The rules governing sails for Modern **spars** are found in Section G of the Appendix of these rules.

C. Rod **rigging** is not allowed.

E.5.2 Forestay

A. The **forestay height** is 26'-7 ½"" (8116mm) with a minimum of 26'-6 1/16" (8078mm) and a maximum of 27'-5 ½" (8370mm).

B. The **forestay** shall be 3/16" dia 1x19 or 7x19 stainless steel wire.

C. Pennants may be ¼" dia 7x19 stainless steel wire.

E.5.3 Backstay

A. The **backstay height** is 39'-1 7/16" (11924mm) with a minimum of 39'-1 3/16" (11918mm) and a maximum of 39'-3 3/16" (11968mm).

B. The **backstay** shall be 5/32" dia 1x19 or 7x19 stainless steel wire.

C. Pennants may be 5/32" dia 7x19 stainless steel wire.

E.5.4 Upper shrouds

A. The **upper shroud height** is 27'-1 13/16" (8276mm) with a minimum of 26'-10 1/16" (8180mm) and a maximum of 27'-6 1/16" (8384mm).

B. **Upper shrouds** shall be 3/16" dia 1x19 stainless steel wire.

E.5.5 Lower shrouds

A. The **lower shroud height** is 13'-6 9/16" (4129mm) with a minimum of 13'-0 15/16" (3986mm) and a maximum of 13'-8 7/16" (4177mm).

B. **Lower shrouds** shall be 3/16" dia 1x19 stainless steel wire.

E.5.6 Diamond shrouds

A. The **diamond shroud top height** is 38'- 4 15/16" (11708mm) with a minimum of 38'- 4 1/16" (11686mm) and a maximum of 38'- 11 1/16" (11864mm).

B. The **diamond shroud bottom height** is 13'- 8 15/16" (4189mm) with a minimum of 13'- 8 3/16" (4170mm) and a maximum of 14'- 6 3/16" (5339mm).

C. **Diamond shrouds** shall be 1/8" dia 1x19 stainless steel wire.

E.5.7 Jumper shrouds

A. The **jumper shroud top height** is 39'-1 1/8" (11916mm) with a minimum of 38'-5 1/8" (11713mm) and a maximum of 39'-1 1/8" (11916mm).

B. The **jumper shroud bottom height** is 16'-1 15/15" (4926mm) with a minimum of 16'-1 3/16" (4907mm) and a maximum of 17'-6 3/16" (5339mm).

C. **Jumper shrouds** shall be 1/8" dia 1x19 stainless steel wire.

E.6 RUNNING RIGGING

E.6.1 General

A. In order to stimulate individual initiative and to improve control, unless specifically prohibited, nothing in these rules should limit the creativity or design of the **running rigging, fittings, controls or equipment**.

E.6.2 Jib Sheeting

A. Other than the **spinnaker pole**, no device or method may be employed to lead a **sheet** outside of the **chain plates**.

Section F - Sails

F.1 MAINSAIL

F.1.1 Dimensions

A. The distance between the forward head point and the aft head point shall not exceed 6 11/16" (170mm).

1. The length of the **leech** measured between the forward head point and the clew point shall not exceed 41'-6" (12,650mm).

(a) The **mainsail** shall have 4 battens that divide the **leech** into 5 nearly equal parts.

2. The **mainsail** shall attach to the **mast** by a boltrope.

3. Boltropes shall not be cut away from the head or tack points by more than 2'-5 ½" (750mm).

F.1.2 Mainsail Girths

A. The closest point of the **luff** of the **mainsail** shall not exceed:

1. 5'-5 15/16" (1675mm) from a point on the **leech** 10'-4 13/16" (3170mm) below the **forward head point**.

2. 9-9 5/16" (2980mm) from a point on the **leech** 20'-10" (6350mm) below the **forward head point**.

3. 13'-2 11/16" (4030mm) from a point on the **leech** 31'-3 3/16" (9530mm) below the **forward head point**.

F.1.3 Miscellaneous

A. The **sail** insignia must be displayed on both sides of the **mainsail** at approximately two-thirds the height of the **sail** and may be displayed on both sides of the **spinnaker** in approximately the middle of the **sail**.

B. In accordance with the ISAF RRS Appendix G, the **sail** insignia shall be at least 1'-7" (483mm) in height and not more than 2'-0" (610mm).

C. The **Yacht's** number in its Fleet shall be displayed underneath the **sail** insignia on the **main sail** and **spinnaker** in the same size as the **sail** insignia.

F.2 JIB

F.2.1 Dimensions

A. The **luff length** measured between the **forward head point** and the **tack point** shall not exceed 25'-7 1/16" (7800mm).

B. The **leech length** measured between the **forward head point** and the **clew point** shall not exceed 23'-9 13/16" (7260mm).

C. The **foot length** measured between the **tack point** and the **clew point** shall not exceed 9'-6 3/16" (2900mm).

D. The distance between the **forward head point** and the **mid-foot point** shall not exceed 25'-2 3/16" (7675mm). **Foot irregularity** shall not exceed 2" (50mm).

E. The distance between the **forward head point** and the **aft head point** shall not exceed 2" (50mm).

F.2.2 Jib Girths

A. The closest point of the **luff** of the **jib** shall not exceed:

1. 2'-7 1/8" (790mm) from a point on the **leech** 5'-11 ¼" (1810mm) below the forward **head point**.

2. 4'-9 ¾" (1465mm) from a point on the **leech** 11'-10 ½" (3620mm) below the forward **head point**.

3. 6'-10 ¾" (2100mm) from a point on the **leech** 17'-6 ¼" (5430mm) below the forward **head point**.

F.2.3 Miscellaneous

A. The **jib** shall have three battens that divide the **leech** into four nearly equal parts.

B. The **jib** shall attach to the **forestay** by hanks.

F.3 SPINNAKER

F.3.1 General

A. The **spinnaker** shall be symmetrical around its **centerline**.

F.3.2 Dimensions

A. The **luff length** shall not exceed 30'-1 7/16" (9180mm).

B. The **girth** shall not exceed 20'-0 3/16" (6100mm) at any point.

C. The distance from the **head point** to the **mid-foot point** shall not exceed 34'-9 11/16" (10610mm).

PART III - APPENDICES

Section G - Modern Rig

G.1 SPARS

G.1.1 MAST

A. General

1. There are two class-approved **rig** configurations, the Classic **rig** and the Modern **rig**.

   (a) The Modern **rig** was developed in the 1970s and is sometimes referred to as the Long Island Sound **rig**. It is a single **spreader** 7/8 **rig** with jumpers and no upper diamond.

   (b) The Classic **rig** is the original 1937 configuration. It is a double **spreader** 3/4 **rig** with an upper diamond and jumpers. Measurement information for this **rig** is contained in the IOD World **Class Rules** above.

2. LFA must specify which configuration(s) are permitted to race within their Fleet.

3. **Mast**s shall be made of a single material, fasteners, fittings, **corrector weights** and adhesives excluded. Approved materials are wood, aluminum, or carbon fiber.

B. Measurement Points

1. The **datum point** is 2'-8 7/8" (835mm) above the **deck** and is limited to plus or minus 1/4" (6mm).

   (a) All vertical **mast** dimensions are measured to this **datum point**.

   (b) The **datum point** shall be permanently etched into the surface of the **mast**.

2. The **top point** shall be a maximum of 39'-8 7/8" (12114mm), above the **mast datum**.

3. The **heel point** can vary but shall be a minimum of 5'-2" (1575mm) below the **mast datum**.

4. The **upper limit point** shall be 38'-11 5/8" (11878mm), above the **mast datum**.

5. The **lower limit point** is the **mast datum**.

6. Mast Bands

   (a) The distance between the **lower mast band** and the **upper mast band** shall not exceed 38'-10" (11836mm).

7. Boom Band

   (a) The distance from the aft face of the **mast** to the inner edge of the **boom band** shall not exceed 16'-2" (4928mm).

C. Weight

1. The **mast weight** shall be a minimum of 200 lbs (90.7kg).

2. The **mast center of gravity** shall be a minimum of 14’-4 1/8” (4372mm) above the **mast datum**.

D. Section

1. Fore-aft dimension

(a) The typical fore-aft dimension of the **mast section** is 5 1/4” (133mm).

(b) The fore-aft dimension of the **mast section** at the top of the **taper** is 3 1/4” (83mm).

2. Transverse dimension

(a) The typical transverse dimension of the **mast section** is 4 1/8” (105mm).

(b) The transverse dimension of the **mast section** at the top of the taper is 4 1/8” (105mm).

3. Taper

(a) The **mast taper** shall not be longer than 9'-3" (2819mm).

E. Spreaders

1. Lower spreaders

(a) The **lower spreader length** is 3’-4” (1016mm) with a minimum of 3’-3” (991mm) and a maximum of 3’-5” (1041mm).

(b) The **lower spreader height** is 13’-6 9/16” (4129mm) with a minimum of 13’-6 1/16” (4116mm) and a maximum of 14’-0 1/16” (4269mm).

2. Jumper spreader

(a) The **jumper spreader length** is 1’-8 1/4” (515mm).

(b) The **jumper spreader** separation is 3’-2” (965mm).

(c) The **jumper spreader height** is 30’-8 1/2” (9361mm)di .

3. Mast Crane

(a) The **mast crane length** is 5 1/4” (133mm).

F. Standing Rigging

1. Forestay

(a) The **forestay height** is 29’-9 7/8” (9090mm).

(b) The **forestay** shall be 3/16” dia 1x19 or 7x19 stainless steel wire.

(c) Pennants may be 1/4” dia 7x19 stainless steel wire.

2. Backstay

(a) The **backstay height** is 39’-7 3/4” (12084mm).

(b) The **backstay** shall be 5/32" dia 1x19 or 7x19 stainless steel wire.

(c) Pennants may be 5/32" dia 7x19 stainless steel wire.

3. Upper shrouds

(a) The **upper shroud height** is 30'-7 3/4" (9340mm).

(b) **Upper shrouds** shall be 3/16" dia 1x19 stainless steel wire.

4. Lower shrouds

(a) The **lower shroud height** is 15'-5 7/8" (4721mm).

(b) **Lower shrouds** shall be 3/16" dia 1x19 stainless steel wire.

5. Jumper shrouds

(a) The **jumper shroud top height** is 39'-2 3/4" (11956mm).

(b) The **jumper shroud bottom height** is 15'-6 5/8" (4739mm).

(c) **Jumper shrouds** shall be 1/8" dia 1x19 stainless steel wire.

(d) Extension of the **jumper stays** to a control point inside the **cabin** is allowed.

6. Rod **rigging** is not allowed.

G. Halyards

1. Main Halyard

(a) The maximum **main halyard height** shall be 38'- 5" (11709mm).

2. Jib Halyard

(a) The **jib halyard height** shall be less than the **forestay height**.

3. Spinnaker Halyard

(a) The **spinnaker halyard height** is 30'-9 1/4" (9380mm).

G.1.2 Boom

A. General

1. The **boom** shall be made of a single material, fasteners, fittings**, corrector weights** and adhesives excluded. Approved materials are wood aluminum, and carbon fiber.

B. Measurement Points

1. The **outer point** distance shall be a max of 16'-2" (4928mm).

C. Weight

1. The minimum weight of the **boom** shall be 40 lbs (18.1kg).

2. The **center of gravity** of the **boom** shall be a minimum of 8'-0" (2438mm) from the aft edge of the **mast**.

D. Section

1. The minimum vertical dimension of the **boom section** shall be 4 1/2" (114mm).

2. The minimum transverse dimension of the **boom section** shall be 2 3/4" (70mm).

G.1.3 Spinnaker Pole

A. General

1. The **spinnaker pole** shall be made of a single material, fasteners, fittings, **corrector weights** and adhesives excluded. Approved materials are wood aluminum, and carbon fiber.

B. Length

1. The maximum **spinnaker pole length** is 8'-5" (2565mm).

C. Weight

1. The minimum **spinnaker pole weight** shall be 8 lbs (3.6kg).

2. The **center of gravity** of the **spinnaker pole** shall be approximately equidistant from each end.

D. Section

1. The minimum cross-sectional dimension of the **spinnaker pole** shall be 2" (57mm).

G.2 SAILS

G.2.1 Mainsail

A. The distance between the **forward head point** and the **aft head point shall** not exceed 6 11/16" (170mm).

B. The **leech length** measured between the **forward head point** and the **clew point** shall not exceed 41'-4" (12,597mm).

C. The **mainsail** shall have four **battens** that divide the **leech** into five nearly equal parts.

D. The **mainsail** shall attach to the **mast** by a boltrope.

1. Boltropes shall not be cut away from the **head** or **tack points** by more than 2'-5 1/2" (750mm).

E. Mainsail Girths

1. The **one quarter girth** shall not exceed 13'-5 1/8" (4092mm).

2. The **one half girth** shall not exceed 10'-1 3/4" (3092mm).

3. The **one quarter girth** shall not exceed 5'-10 5/8" (1800mm).

F. The sail insignia must be displayed on both sides of the **mainsail** at approximately two-thirds the height of the **sail** and may be displayed on both sides of the **spinnaker** in approximately the middle of the **sail**.

1. In accordance with the ISAF RRS Appendix G, the sail insignia shall be at least 1’-7" (483mm) in height and not more than 2’-0" (610mm).

2. The **Yacht's** number in its Fleet shall be displayed underneath the sail insignia on the **main** and **spinnaker** in the same size as the class insignia.

G.2.2 Jib

A. The **luff length** measured between the **forward head point** and the **tack point** shall not exceed 29’-3” (8915mm).

B. The **leech length** measured between the **forward head point** and the **clew point** shall not exceed 27’-6 1/8” (8384mm).

C. The **foot length** measured between the **tack point** and the **clew point** shall not exceed 9’-3” (2819mm).

D. **Foot irregularity** shall not exceed 2” (50mm).

E. The distance between the **forward head point** and the **aft head point** shall not exceed 2” (50mm).

F. Jib Girths

1. The maximum **one quarter girth** is 6’-9 1/4” (2064mm).

2. The maximum **one half girth** is 4’-8 1/4” (1428mm).

3. The maximum **one quarter girth** is 2’-6 3/4” (780mm).

G. The **jib** shall have three **battens** that divide the **leech** into four nearly equal parts

H. The **jib** shall attach to the **forestay** by hanks.

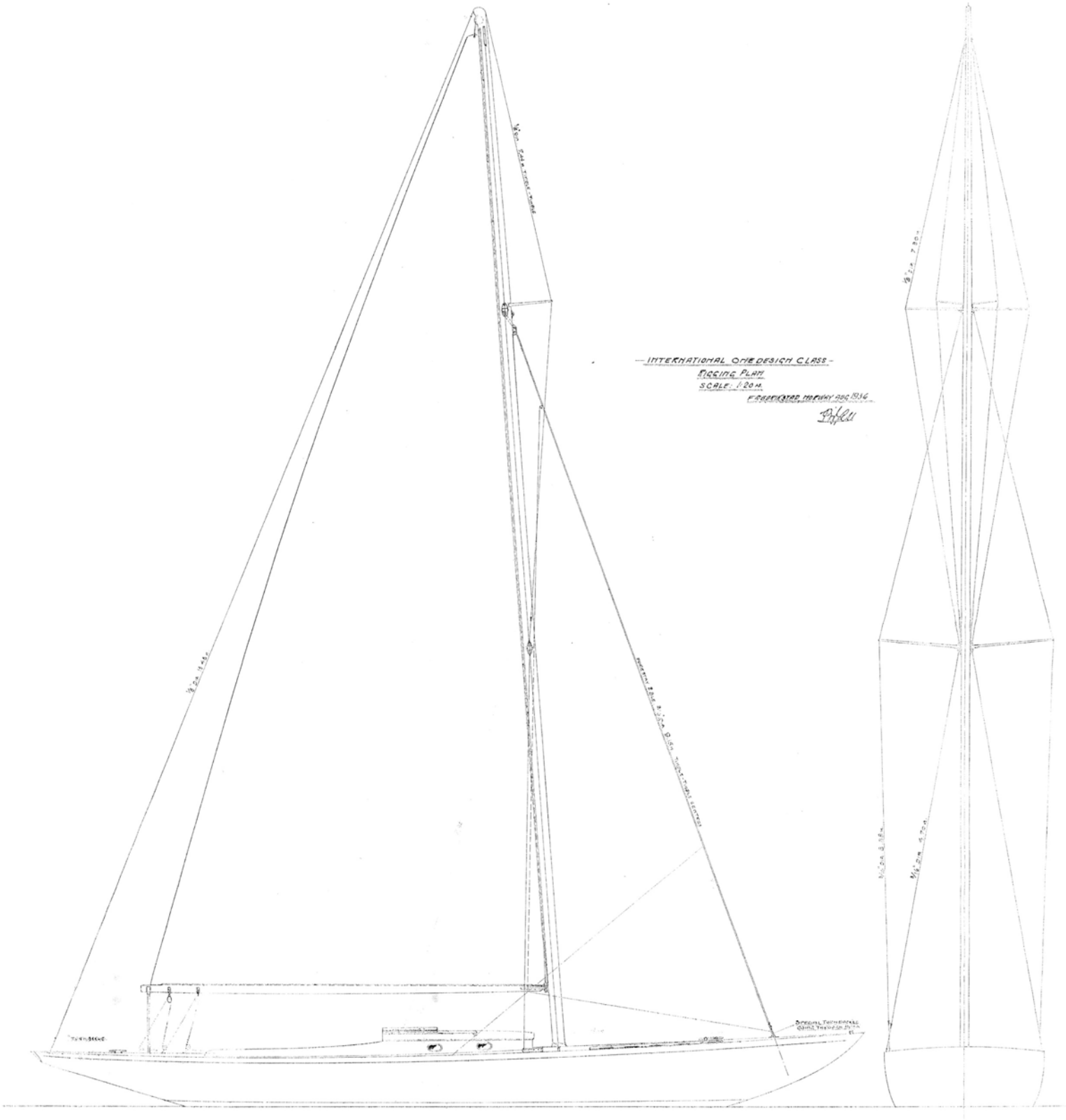
G.2.3 Spinnaker

A. The **spinnaker** shall be symmetrical around its **centerline**.

B. The maximum **luff length** is 32’-0” (9754mm).

C. The maximum **half girth** is 19’-12” (6096mm).

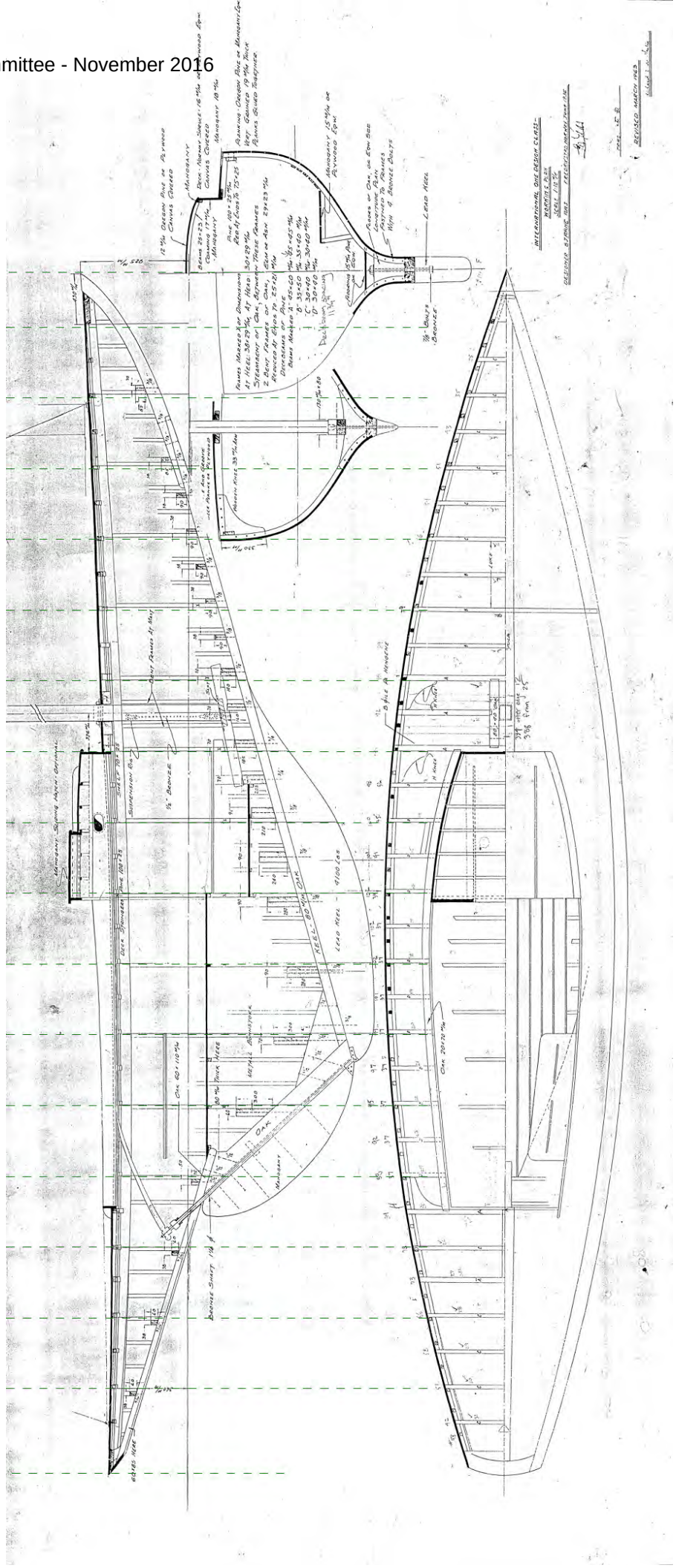
D. The maximun **foot round** is 9 7/8” (250mm).



Rigging Plan

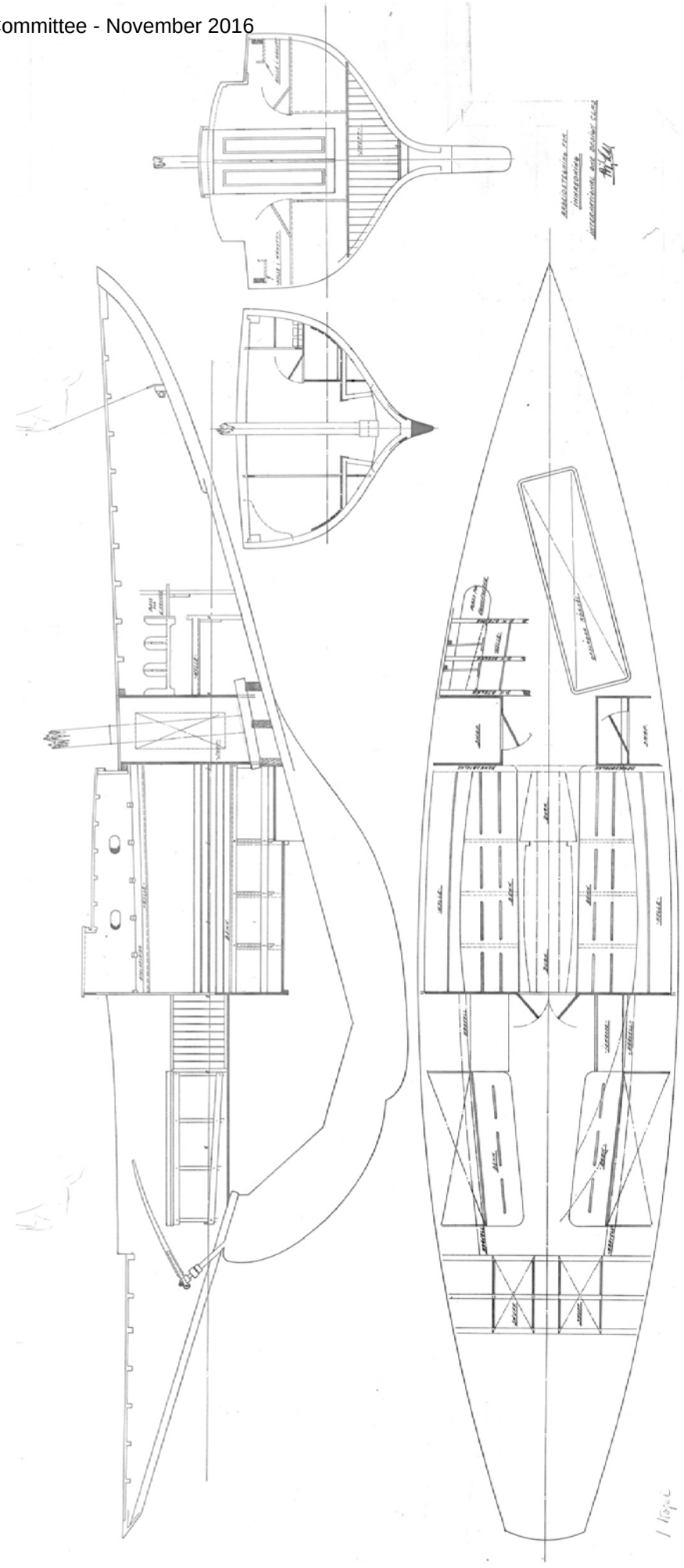
International One-Design World Class Rules

I



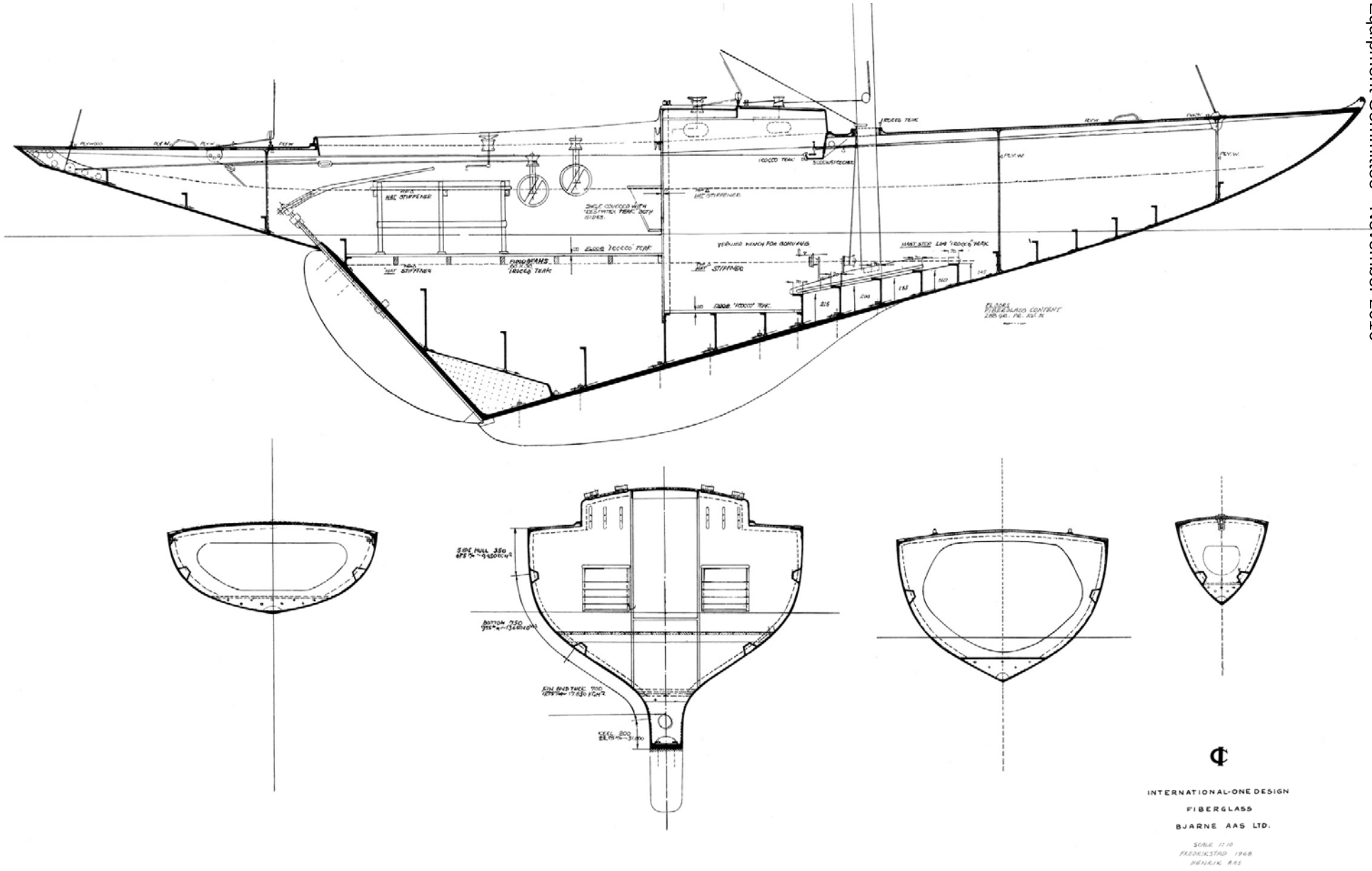
Working Plan

International One-Design World Class Rules



Long Cabin

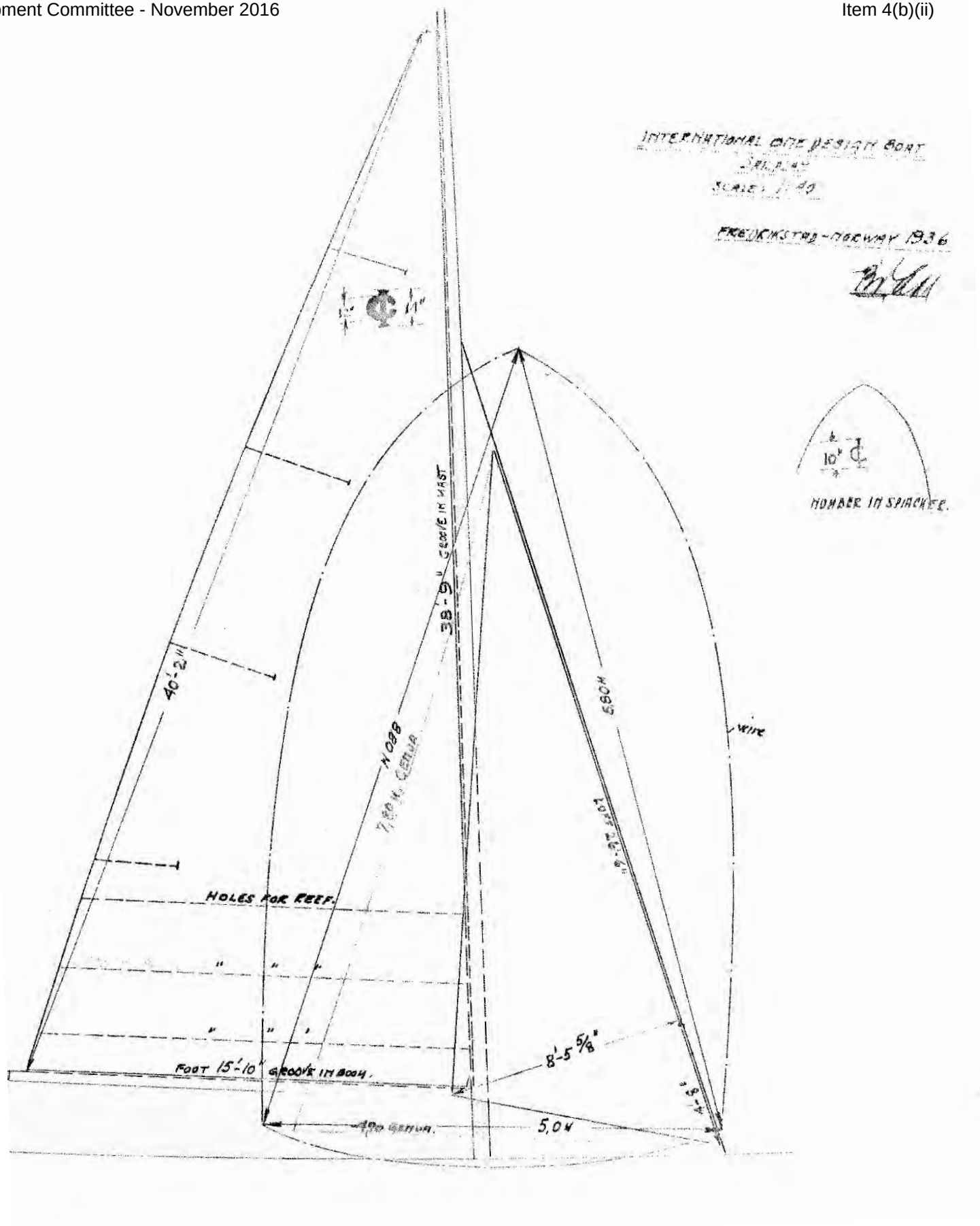
International One-Design World Class Rules



Working Plan - Fiberglass

International One-Design World Class Rules

IV

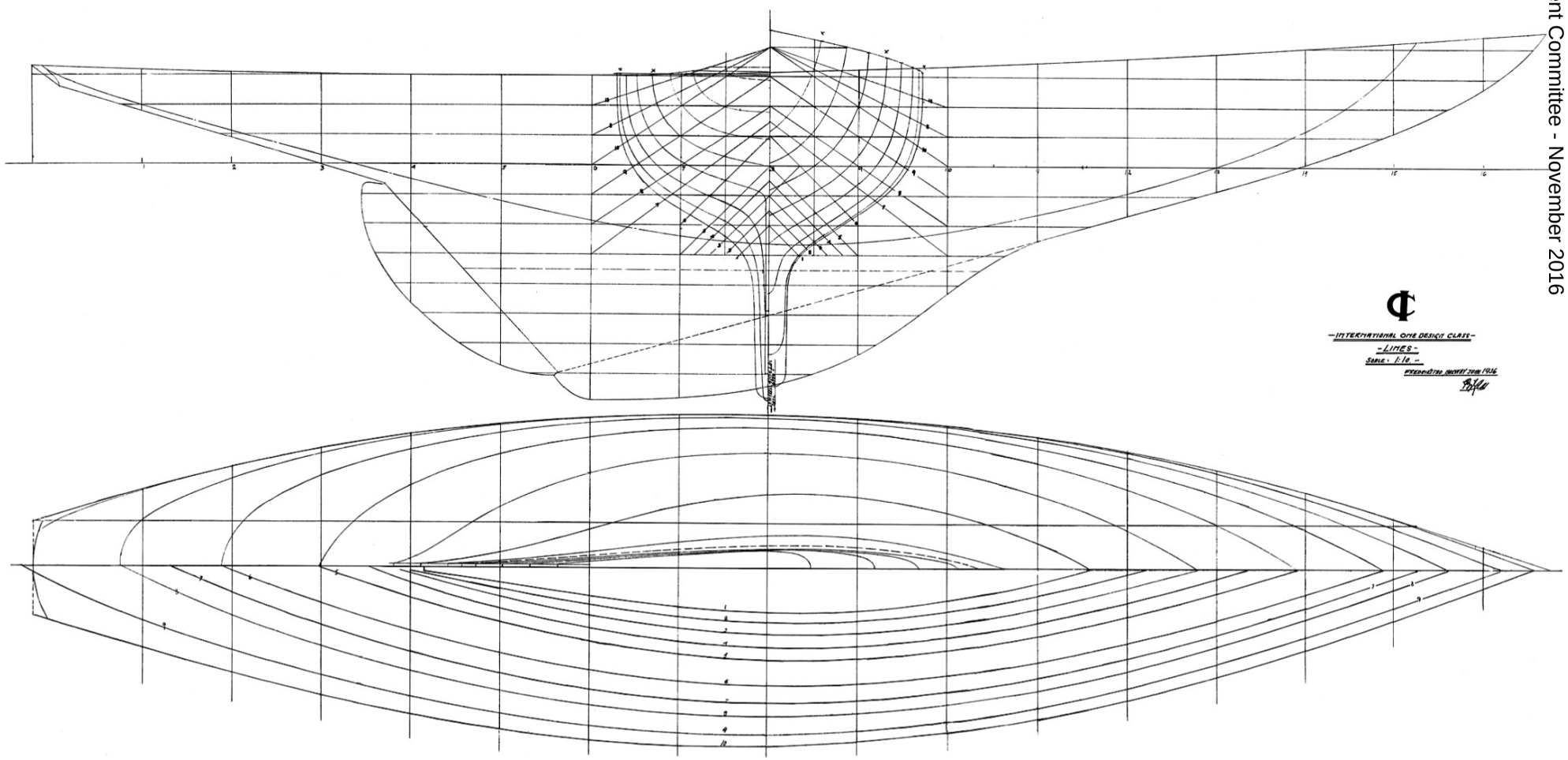


Sail Plan

International One-Design World Class Rules

The dimensions shown in this drawing have been changed in the Class Rules. The drawing has been included for general arrangement & historical reference.

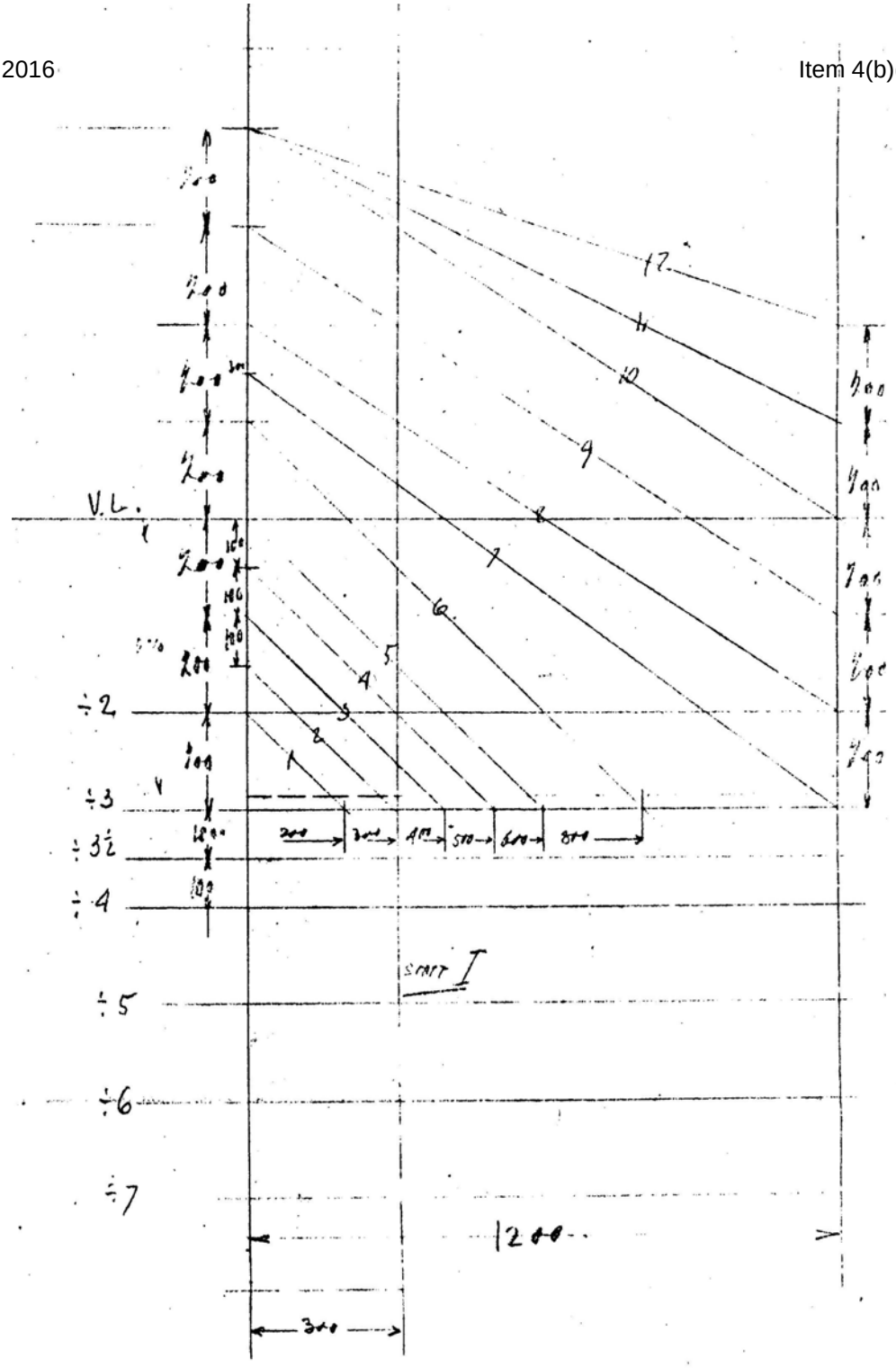
V



Lines

International One-Design World Class Rules

VI



ONE DESIGN CLASS -

DIAGONAL SCHEME.

JULY 1936

Diagonal Scheme

International One-Design World Class Rules

VII

DIAGONALER

P.nt	SPRING	D. BR.	SP.F.	D.KT. TREK.	1	2	3	4	5	6	7	8	9	10	11	12	÷2	3	4	5	6	7	SM. I	VF ÷3		1	2	3	4	5	
1	635	516	+355									70	364	547	554	545							395							110	a
2	619	670	+179							27	174	328	560	712	712	705							223							32 145	b
3	607	795	÷ 3						6	243	389	531	727	861	854	832							+ 57							69 175	c
4	601	895	322			25	40	102	205	425	569	697	870	990	970	940							÷100				26	40	105	208	4
5	600	964	975		100	140	195	276	368	575	710	827	981	1090	1060	1020	100	44	28				245	34		32	46	68	138	237	D
6	603	1010		1333	187	243	316	403	490	685	815	921	1062	1158	1116	1067	256	105	67	58	51	42	374	80	47	45	65	95	170	265	E
7	615	1030		1166	258	323	402	489	575	758	881	978	1108	1193	1142	1087	416	176	108	99	93	86	473	128	93	58	85	122	200	293	F
8	630	1031		999	296	362	444	531	616	788	904	997	1120	1196	1139	1084	496	219	129	123	118		525	152	125						
9	648	1010		832	286	355	435	521	605	775	888	973	1093	1165	1111	1057	480	205	120	110	89		515	143	114						
10	668	962		665	215	290	375	462	550	720	830	915	1030	1100	1054	1009	372	108	41				445	63	75						
11	695	892		498	95	180	268	360	448	625	730	815	930	1005	964	924	176						326								
12	725	795		331		30	122	224	316	495	597	682	796	877	845	817							178								
13	760	672		÷164				62	158	340	435	516	634	721	700	681							0								
14	798	521		+ 17						165	256	335	452	538	525	515							+245								
15	838	350		230							55	132	255	341	333	329							665								
16	882	174		528									45	124																	
F.S.	910																														

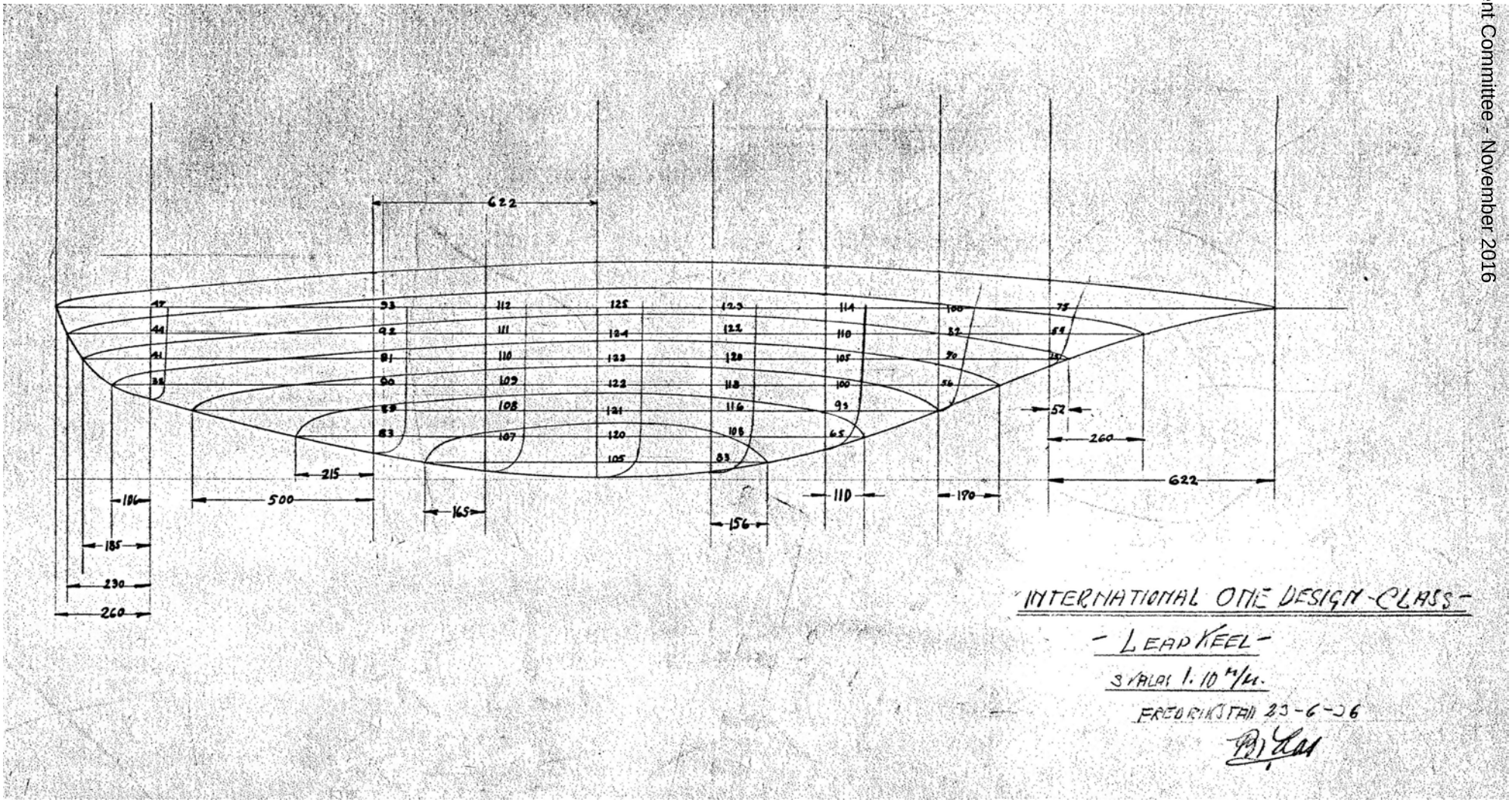
ONE DESIGN CLASS

JULI 1936
-Allen

Table of Offsets

International One-Design World Class Rules

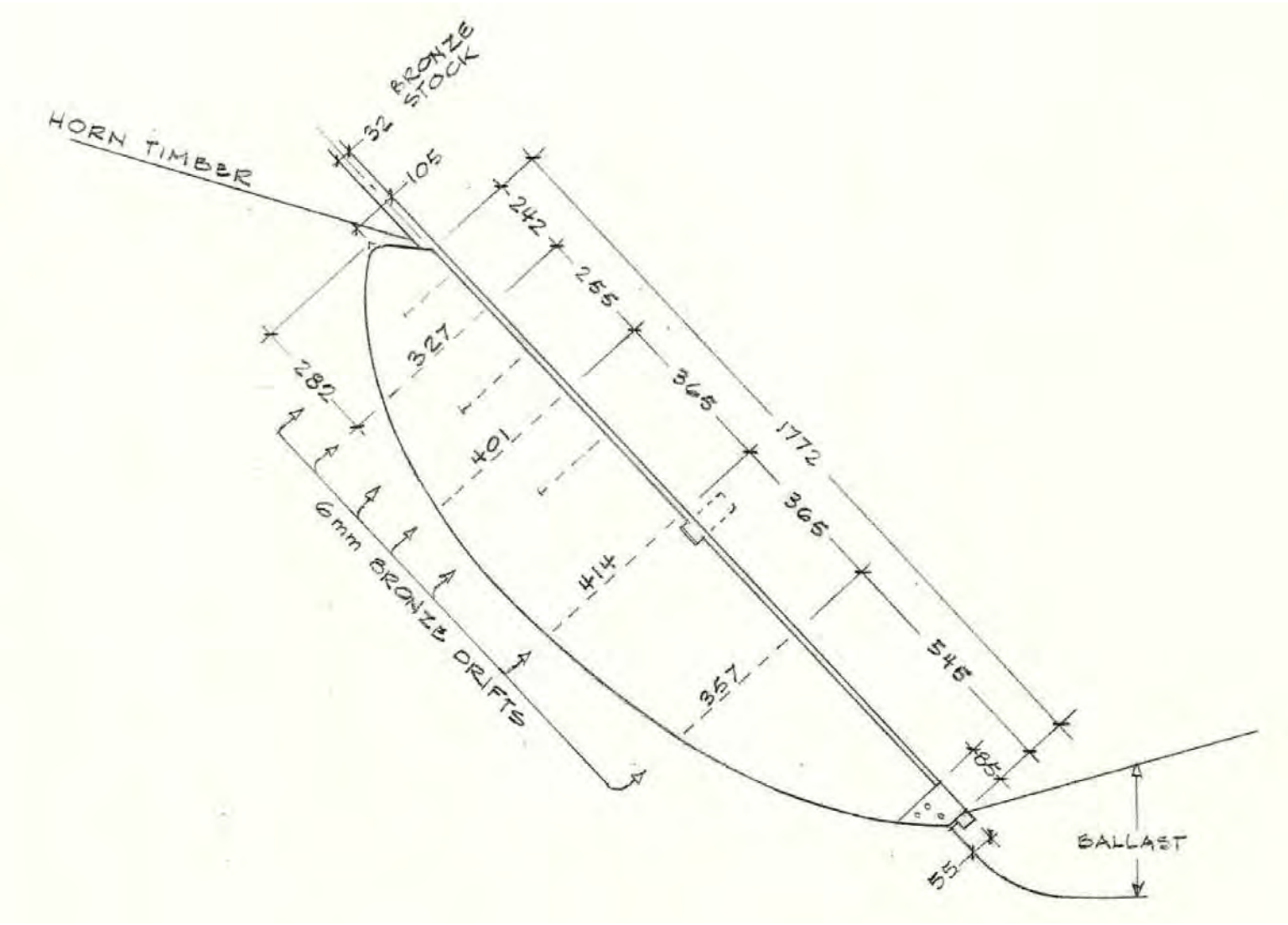
VIII



Lead Keel

International One-Design World Class Rules

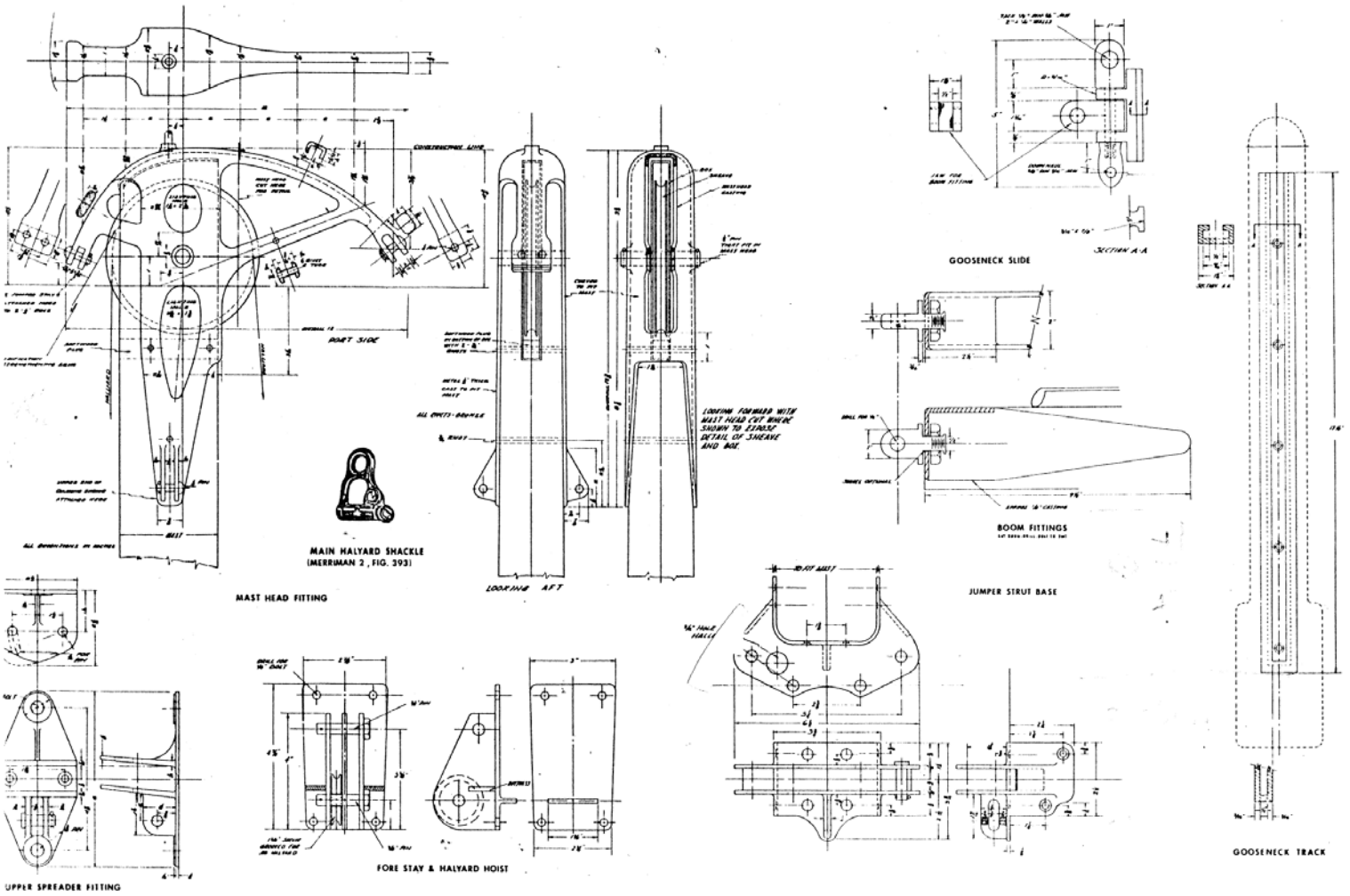
IX

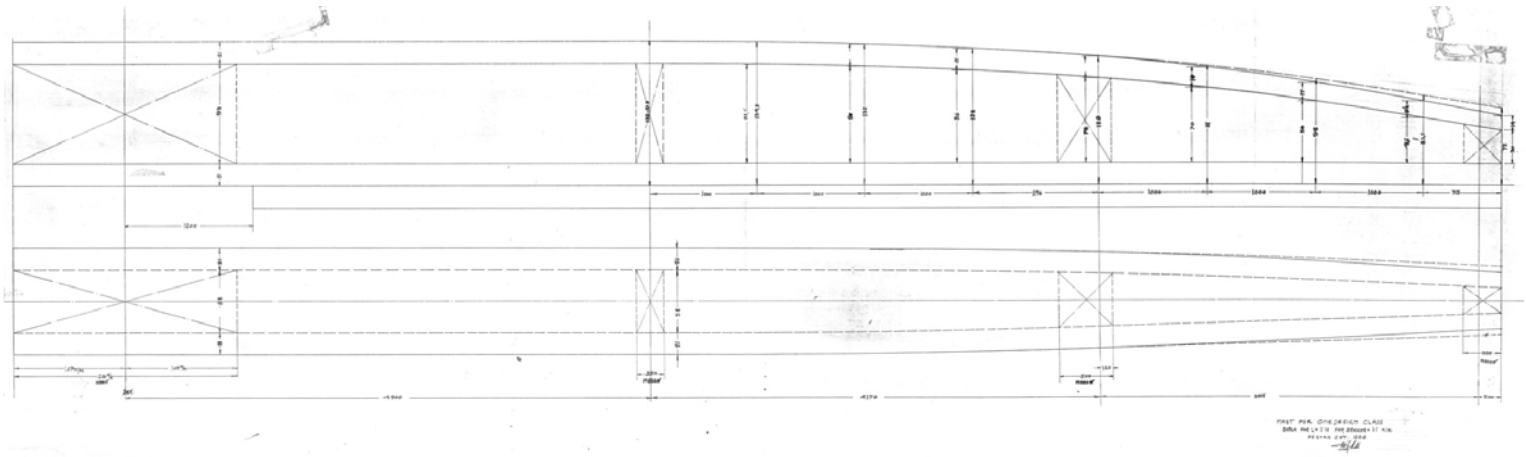


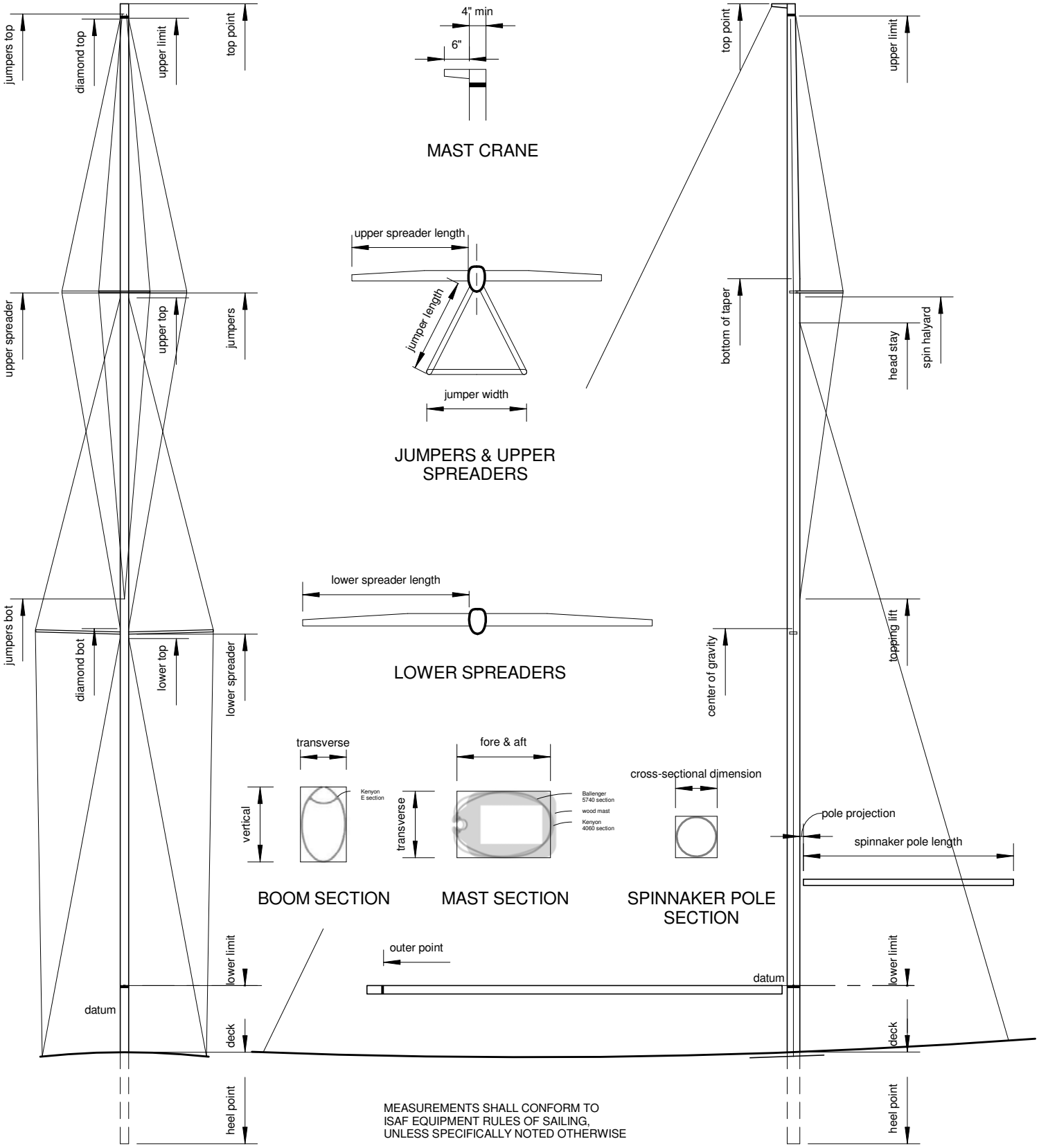
Rudder

International One-Design World Class Rules

X


MAIN HALYARD SHACKLE
(MERRIMAN 2 , FIG. 393)
MAST HEAD FITTING
GOOSENECK SLIDE
BOOM FITTINGS
JUMPER STRUT BASE
GOOSENECK TRACK
UPPER SPREADER FITTING
FORE STAY & HALYARD HOIST





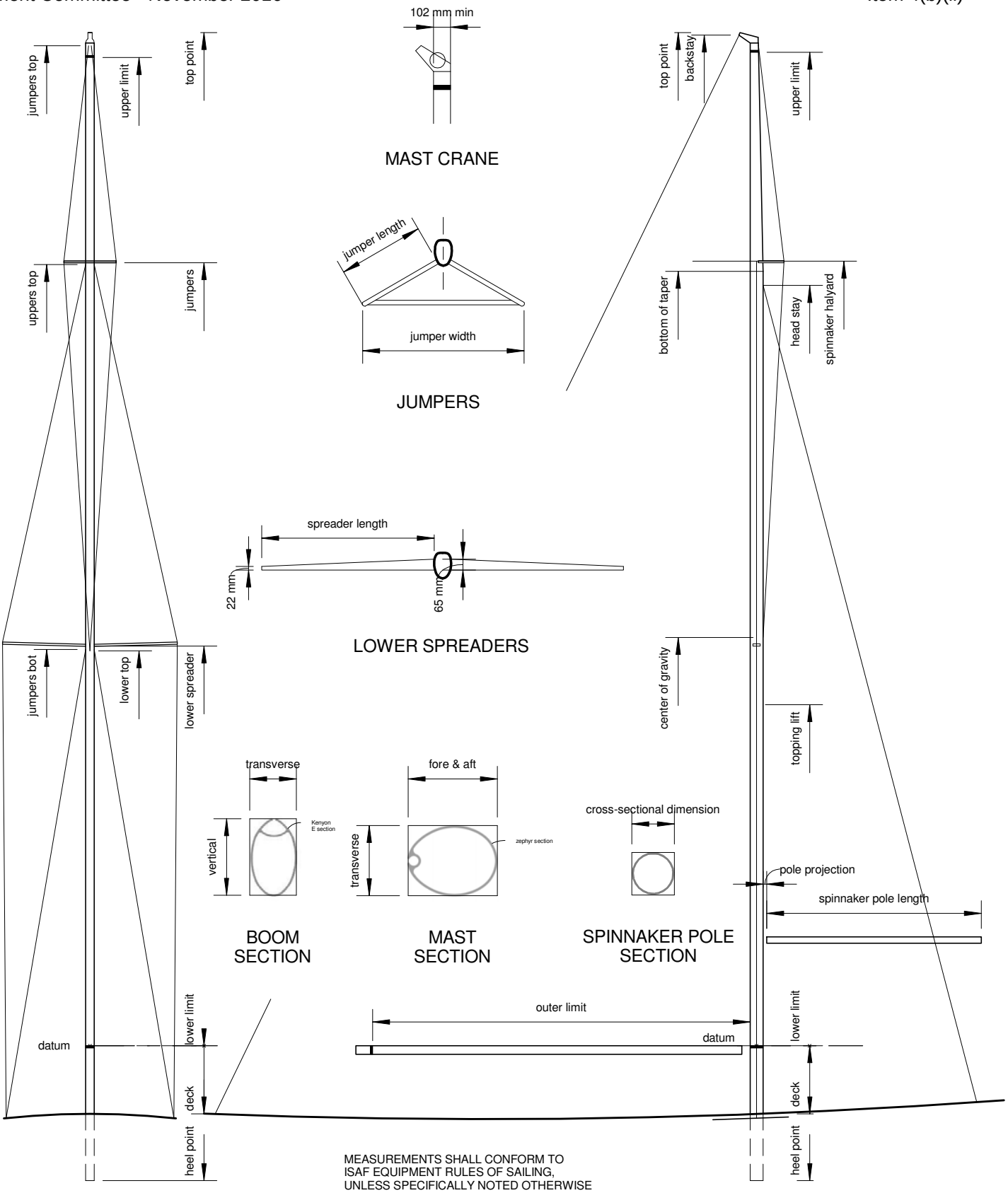
MEASUREMENTS SHALL CONFORM TO ISAF EQUIPMENT RULES OF SAILING, UNLESS SPECIFICALLY NOTED OTHERWISE

ALL VERTICAL MAST DIMENSIONS ARE MEASURED TO THE DATUM POINT

Classic Spars

International One-Design World Class Rules

XII



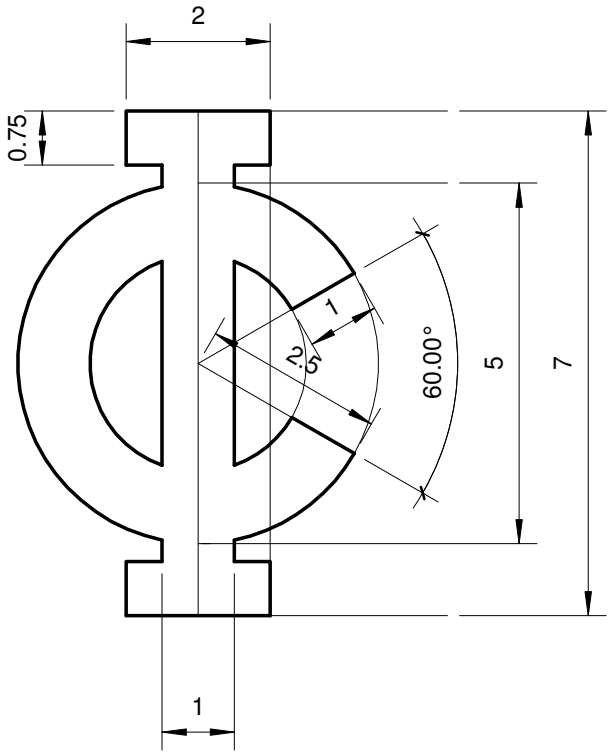
MEASUREMENTS SHALL CONFORM TO
ISAF EQUIPMENT RULES OF SAILING,
UNLESS SPECIFICALLY NOTED OTHERWISE

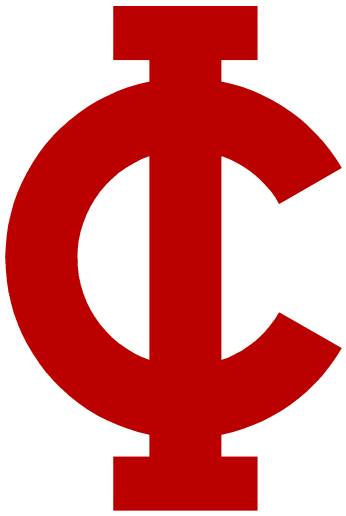
ALL VERTICAL MAST DIMENSIONS
ARE MEASURED TO THE DATUM POINT

Modern Spars

International One-Design World Class Rules

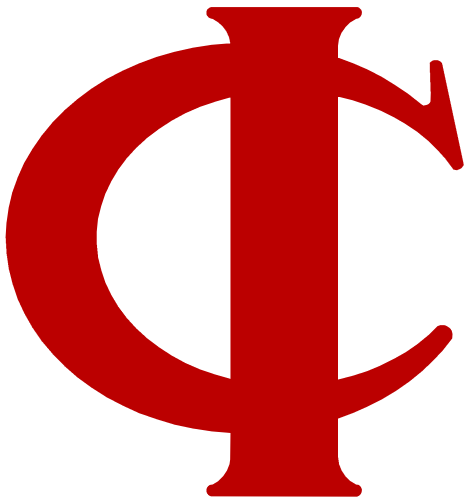
XIII





SAIL INSIGNIA

The layout of this sail insgnia is intended to standardize the Class symbol which has varied considerably over time. This design is based on the earliest insignias from the original Long Island Sound Fleet.



LOGO

This logo was used by Bjarne Aas on the original design drawings for the Class