THE RULES

OF THE

INTERNATIONAL

DRAGON

CLASS

British Authority :
Royal Yachting Association
78 Buckingham Gate, S.W.1

Date : 12th November, 1952

Copies of this booklet (price 2s. 6d. each, surface post free) and the official set of six building plans (price 39s. 6d., surface post free) are obtainable from :—

Royal Yachting Association
78 Buckingham Gate
London, S.W.1

CONSTRUCTION.

These rules must be complied with in order that a certificate of registration may be issued by the National Authority after construction is completed in accordance with the I.Y.R.U. racing rule 3.

The builder will supply a certificate to the measurer stating that the yacht has been built to I.Y.R.U. DRAGON drawings Nos. 1, 2 and 3. Notwithstanding the above it is at all times the obligation of the owner to see that these rules have been complied with.

In these rules where particular kinds of wood are mentioned, other kinds of wood may be used provided they have the same specific weight and durability.

1. Stem, wood keel, counter timber and sternpost to be of oak. Deadwood to be of oak or pine, to dimensions given on the plans. The ballast keel must be made of cast iron to weigh 1,000 kilogrammes (2,205 pounds). Uneven surfaces or blowholes must not be filled with lead. Inside ballast is not permitted.

2. Rudder stock to be of at least 25 millimetres (1 inch) round iron, galvanised.

3. Sternboard or transom to be of oak or of a wood of equivalent specific weight, 20 millimetres (13/16 inch) thick. Transom to be flat.

4. Planking to be at least 17 millimetres (11/16 inch) thick. Any kind of wood may be used for planking provided that the minimum weight of such wood shall not be less than 550 kilogrammes per cubic metre (33 pounds per cubic foot). To be fastened to frames with No. 11 guage copper nails 38 millimetres (1½ inches) long clenched on rooves or turned over or with No. 11 brass screws 32 millimetres (1¼ inches) long.

5. Bent frames to be of ash, oak or elm, spaced 200 millimetres (7-7/8 inches) centre to centre. To be moulded 25 millimetres x 30 millimetres (1 inch x 1-3/16 inches) for half the yacht's length amidships, and moulded 22 millimetres x 25 millimetres (7/8 inches x 1 inch) at the ends. Two frames abreast the mast are to be moulded 30 millimetres x 34 millimetres (1-3/16 inches x 1-3/8 inches) and these may be grown or laminated frames if made of oak. Similar oak grown or laminated frames must be used at the measurement sections at 4, 8 and 12. Sections to be spaced 600 millimetre (23-5/8 inches) centre to centre.

6. Shelf to be of Scandinavian Pine or Fir or Larch or Oregon Pine at least 27 millimetres x 100 millimetres (1-1/16 inches x 3-15/16 inches) or at least 24 millimetres x 115 millimetres (15/16 inch x 4½ inches).

7. Beams to be of larch, Scandinavian pine or fir or Oregon pine of the following dimensions :—

Mast beams and beams at end of cockpit and cabin top openings — 40 millimetres x 60 millimetres (1-9/16 inches x 2-3/8 inches) at middle line to 40 millimetres x 40 millimetres (1-9/16 inches x 1-9/16 inches) at sides.

Complete beams between sections 3 and 13 — 30 millimetres x 45 millimetres (1-3/16 inches x 1¾ inches) at middle line to 30 millimetres x 30 millimetres (1-3/16 inches x 1-3/16 inches) at sides.

Half beams at sides of cockpit, etc. — 25 millimetres x 38 millimetres (1 inch x 1½ inches) to 25 millimetres x 25 millimetres (1 inch x 1 inch) at sides.

Spacing not to exceed 25.4 centimetres (10 inches) centre to centre.

8. Deck to be of larch, Scandinavian pine or fir, Oregon pine, plywood or spruce, with a minimum weight of 450 kilogrammes per cubic metre (27 pounds per cubic foot), not less than 14 millimetres (9/16 inch) thick, and covered with canvas of not less than 7 ounces per square yard, linoleum, or board and painted.

The Deck may be of plywood only, then it must be 15 millimetres (19/32) inch thick, and of 7.6 kilogrammes per square metre (1.56 pounds per square foot).

9. Covering board to be of mahogany 95 millimetres (3¾ inches) maximum width. It is also permitted to have a mahogany covering board of optional width round the cabin top.

10. Floor timbers to be of oak, sided 70 millimetres (2¾ inches) for the length of the ballast keel and 50 millimetres (2 inches) beyond the keel. For one half of their length the siding can be tapered down to two-thirds of the specified width.

11. The mast step is to be made of oak 1,350 millimetres x 150 millimetres x 60 millimetres (4 feet 5-1/8 inches x 5-15/16 inches x 2-3/8 inches).

It is permitted to have one or two lifting bolts attached to the keel or the floor timbers.

CABIN, COCKPIT AND HATCHES.

12. The cabin, which may be totally enclosed, shall have built-up cabin sides of 16 millimetres (5/8 inch) mahogany and a coach roof of 10 millimetres (7/16 inch) of optional wood or plywood, on wooden beams. The wooden cabin roof may be covered with canvas, linoleum or board, and the length of the top must be not less than 10,000 millimetres (3 feet 3-3/8 inches).

Where the mast passes through the cabin, the distance from the aft side of the mast to the aft side of the cabin top must not be less than 900 millimetres (2 feet 11-7/16 inches). The shape of the cabin top is optional but its breadth must be at least 500 millimetres (1 foot 7-11/16 inches) at a distance of 1,000 millimetres (3 feet 3-3/8 inches) from the after end of the cabin top, and at this point the height of the coaming must not be less than 80 millimetres (3-3/16 inches).

The after end of the cabin top must never come forward of section 8, and in no place may the cockpit or any portion thereof, or the opening of any cabin hatch, be forward of section 8 during races.

The height of the cabin sides above the top of deck, measured vertically from the under side of the coach roof at section 8, must be at least 170 millimetres (6-11/16 inches) and the arch of the coach roof measured at the same place must be at least 100 millimetres (3-15/16 inches).

The height of the cockpit coaming abaft the cabin must be at least 100 millimetres (3-15/16 inches). The coaming may be plumb or sloping.

Internal arrangements of cabin and cabin fittings are optional and a hatch forward of the mast is permitted, but its size must not exceed 508 millimetres (20 inches) square, and it must be properly framed out and have a hinged top, or a top permanently secured at one point at least.

13. The cockpit must not be extended further aft than 200 millimetres (7-7/8 inches) forward of section 12, and this coaming must follow a fair convex curvature. The minimum width of the deck outside the cockpit coaming is to be 300 millimetres (11-13/16 inches), and the coaming should fair into the cabin sides. Rounded corners are permitted at the after end of the cockpit but the radius of these rounded corners must not exceed 152 millimetres (6 inches).

Extension of the coaming forward of the cabin top and abaft the cockpit is not obligatory.

The arrangement and layout of the cockpit are optional.

14. The tiller must not be placed below deck nor may any extension be made to the tiller. Maximum length of tiller to be 1.20 metres (3 feet 11¼ inches). The shape of tiller to be optional.

RIGGING, SPARS, ETC.

15. The standing rigging and spars must be in accordance with the plans. The sizes of the standing rigging are minimum sizes and it is to consist of the best galvanised plough or stainless steel wire.

The runner backstays and topmast backstay, whether standing or running must be galvanised or stainless steel wire, plough or flexible. They shall not be smaller than shown on the plans.

The dimensions of the other running rigging are optional.

It is permissible to have topping lifts and to run the jumper stays through fairleads at the lower cross trees and down along the mast.

The halyards may be run through the deck.

The mainsail luff rope and the halyard may run in a groove, provided such a groove is outside the prescribed minimum sectional dimensions of the mast.

The attachment of the spinnaker halyard shall be at a maximum of 7.10 metres (23 feet 3½ inches) above the deck and not more than 30 millimetres (1-3/16 inches) out from the mast.

Back stays or runners and top mast stay or preventer are obligatory, but their location on deck is optional in the fore and aft directions, and they may be stretched either on or below the deck.

The extension of the forestay must intersect the mast at 7.00 metres (22 feet 11-5/8 inches) above the deck and go directly to or through the deck at a point 1.85 metres (6 feet 7/8 inch) forward of the mast. Double forestays are permitted.

The shrouds are to be fixed to steel chain plates inside the hull. The shrouds may pass through the deck inside the gunwale but not nearer the centreline than 0.70 metres (2 feet 3-9/16 inches).

16. The mast is to be made of one kind only of optional wood. The diameter of the solid section must not be less than is shown on the plans.

A runway track or groove for the mainsail luff rope and the halyard is allowed, but it must not impinge upon the prescribed minimum diameter of the solid part of the mast.

The groove at the back of the mast may be strengthened at the lower part with hardwood or metal.

A bracket or chock may be fitted at the mast head to keep the preventer clear of the sail. This bracket must not extend aft more than 102 millimetres (4 inches) from the back of the mast.

The mast must not be made to rotate and the mast hole in the deck must not allow more than 10 millimetres (3/8 inch) clearance around the mast.

The fore and aft position of the mast in the deck and the longitudinal position of the mast step are optional, but it is not permissible to make any change during a race.

17. Jumper struts are to have their upper edge at 7.10 metres (23 feet 3½ inches) above deck and are to have a minimum length of 300 millimetres (11-13/16 inches).

The angle between the arms of the jumper struts must not exceed 150 degrees. They may be made of optional material.

The crosstrees are to have their upper edge at 4.4 metres (14 feet 5¼ inches) and are to have a minimum length of 450 millimetres (1 foot 5¾ inches) from the side of the mast. They may be made of optional wood and may be secured with one bolt allowing a movement in the fore and aft direction not exceeding 10 degrees either way.

18. The boom is to be solid, of optional wood. It must have a circular or oval transverse section and a groove for the foot rope is allowed. Depth of the groove not to exceed 22 millimetres (7/8 inch) and the least transverse width of the spar is to be 80 millimetres (3-1/8 inches).

The length of the boom from its after end to the aft side of the mast must not exceed 3.550 millimetres (11 feet 7-13/16 inches).

19. Winches, tackles and levers are allowed to be used for any purpose on board, with the exception of shrouds, which have to be trimmed with turn buckles only.

Method of sheeting the mainsail and headsails is optional, but fittings for sheets must be placed so that they do not protrude outside or beyond the hull.

20. The spinnaker boom must be circular and solid. Length 1.85 metres (6 feet 7/8 inch) and is to be measured in the position of the greatest extension from the mast to the inner edge of the eye of the tack fitting.

Over a minimum distance of half its middle length the spinnaker boom must have a diameter of at least 50 millimetres (2 inches). tapering evenly towards the ends.

The spinnaker boom may have a claw or pintle for attachment to the mast or an arrangement with guide or fitting in the spinnaker boom in the middle of the front of the mast is permitted.

If a claw is used, the spinnaker boom is to be measured according to the International Rule. It is permitted to carry a spare spinnaker boom on board.

SAILS.

21. Sails which can be considered to have been intentionally made so that they do not comply with the following dimensions are not allowed. These measurements must not be exceeded when the sail is first measured.

Mainsail. Luff 9.20 metres (30 feet 2-3/16 inches).
Foot 3.45 metres (11 feet 3-13/16 inches).
Leach 9.50 metres (31 feet 2 inches).

The measurement across the sail from the middle of the luff to the middle of the leach, and from a point 75 per cent. of the luff to a point 75 per cent. of the leach, measured from the boom upwards, shall never exceed 2.08 metres (6 feet 10 inches), and 1.17 metres (3 feet 10 inches) respectively.

Foresail No. 1. Luff 6.20 metres (20 feet 4-1/8 inches).
Foot 2.15 metres (7 feet 5/8 inch).
Leach 5.60 metres (18 feet $4\frac{1}{2}$ inches).

Foresail No. 2. Luff 5.20 metres (17 feet $\frac{3}{4}$ inch).
Foot 1.90 metres (6 feet 2-13/16 inches).
Leach 4.50 metres (14 feet 9-3/16 inches).

Two battens are allowed in the respective jibs, maximum length 300 millimetres (11-13/16 inches).

Genoa. Luff 6.60 metres (21 feet 7-7/8 inches).
Foot 3.55 metres (11 feet $7\frac{3}{4}$ inches).
Leach 6.10 metres (20 feet 3/16 inch).

Spinnaker Leaches 7.00 metres (22 feet 11-5/8 inches).
Foot 4.80 metres (15 feet 9 inches).
Round to foot 0.60 metres (1 foot 11-5/8 inches)

The measurement from a point half way down each leach across the sail is to be 5.00 metres (16 feet 5 inches) and the measurement from a point quarter-way down each leach from the head across the sail is to be 3.40 metres (11 feet 2 inches). A tolerance of plus or minus 100 millimetres (3-15/16 inches) is allowed.

22. The mainsail, Number 1 foresail and Number 2 foresail are to be made from cloth of the same weight and texture as Swallow Wings Number 620. Two Genoa staysails are permitted, one to be made from cloth of the same weight and texture as Swallow Wings Number 620 and the other from cloth of the same weight and texture as Swallow Wings Number 460. The spinnaker to be optional quality, weighing not less than $2\frac{1}{4}$ ounces per square yard and fitted with wires in the leach and luff, the minimum diameter of which shall be 1.25 millimetres (1/20 inch). Nylon, silk or similar material are not permitted. Spinnakers measured and

stamped in 1949 or earlier are permitted even if they have no wire leach until January 1st, 1953.

During racing it is prohibited to use more than one mainsail, one foresail Number 1, one foresail Number 2, one light and one heavy Genoa staysail and one spinnaker, and no sail may be used unless the serial number is clearly stamped thereon by the Sailmaker and the boat's Certificate of Measurement carries the appropriate endorsements.

23. Patent reefing gear for the mainsail is permitted, also reefs for Number 1 and Number 2 foresails. The pockets in the leach of the mainsail shall not exceed by more than 50 millimetres (2 inches) the measurements given for the battens on the sail plan, which are for lower and upper battens 450 millimetres (1 foot $5\frac{3}{4}$ inches), for the two middle battens 600 millimetres (1 foot 11-5/8 inches). No dimension of the headboard is to exceed 120 millimetres ($4\frac{3}{4}$ inches).

The luff is measured from the top of a black band, below which the top of the boom cannot be lowered, to the bottom of the black band above which the top of the headboard cannot be hoisted. Stops are to be fitted at these positions.

EQUIPMENT.

24. Equipment must include one anchor weighing at least 12.7 kilogrammes (28 pounds), of recognised pattern, with a 16 millimetre (2 inch) anchor rope at least 30 metres (100 feet) long. Two 16 millimetre (2 inch) mooring ropes, each 10 metres (33 feet) long, one bilge pump, three life-belts or jackets, two oars or paddles, or one of each, one bucket or baler.

CREW.

25. During a race there may not be more than three persons on board, all Amateurs.

MEASUREMENT INSTRUCTIONS.

Before the certificate of measurement is issued, the following special requirements must be checked :—

1. *Length Overall*	*Maximum*	*Minimum*
8.900 metres	8.944 metres	8.855 metres
29 ft. 2½ inches.	29 ft. 4¼ inches.	29 ft. 0¾ inches.

2. Width over deck, under :—

Section 4.	*Maximum*	*Minimum*
1. 468 metres	1. 475 metres	1. 461 metres
4 ft. 9¾ inches	4 ft. 10-1/16 inches	4 ft. 9½ inches.
Section 8	*Maximum*	*Minimum*
1.958 metres	1.968 metres	1.948 metres
6 ft. 5 inches	6 ft. 5-3/8 inches	6 ft. 4-5/8 inches
Section 12	*Maximum*	*Minimum*
1.550 metres	1.558 metres	1.542 metres
5 ft. 1 inch	5 ft. 1-5/16 inches	5 ft. 0-11/16 inches.

3. The form of Sections 4, 8 and 12 must be checked by metal templates certified and stamped by the national authority. A deviation of .5 per cent. of the skin girth will be allowed in the form at each of the sections, provided that when the templates are applied, the sum of the deviations measured at their maximum do not exceed .5 per cent. of the skin girth.

4. A Certificate from the foundry that the weight of the keel is :—

Maximum	*Minimum*
1000 kilogrammes	1010 kilogrammes	990 kilogrammes
2205 pounds	2227 pounds	2183 pounds

A deviation of plus or minus 1 per cent, as shown, is allowed.

5. That the mast has an upper black band marked upon it, the lower edge of which is the maximum height permitted for the mainsail, 10 metres (32 feet 9-11/16 inches) from the deck, and a lower black band marked upon it, the upper edge of which determines the lowest position of the top of the boom at mast, 0.80 metres (2 feet 7½ inches) from the deck.

That the boom has a black band marked upon it, the inner edge

of which determines the maximum outhaul of the sail, 3.45 metres (11 feet 3-13/16 inches) from the after side of the mast.

The deviation of .5 per cent allowed in Instruction 3 does not apply to these dimensions.

6. It is the responsibility of the measurer to satisfy himself that in addition to conforming at the above-mentioned measurements stations, the boat conforms in every way with the international DRAGON class plans and rules, and that no material other than that permitted by the Rules has been used in the construction of the boat or of her spars or gear.

7. The duration of the certificate shall be for the life of the boat and she shall not be liable for re-measurement at any time unless major repairs have taken place.

International DRAGON Class

Spinaker measurement plan—not to scale

I.Y.R.U. November, 1952

In measuring a spinaker, in order to arrive at the three dimensions.

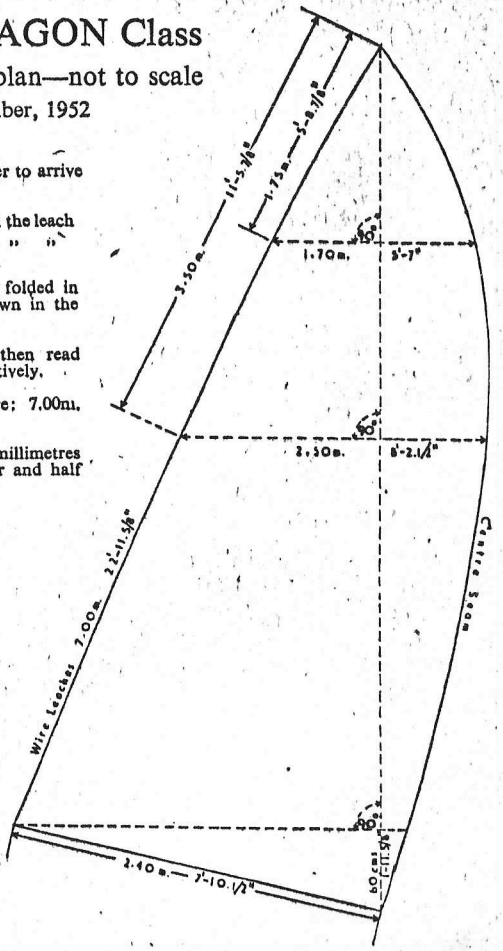
3.40 mtrs., across quarter way down the leach
5.00 mtrs., " half " " " "
4.80 mtrs., along the foot.

The sail should be laid on the floor folded in half down the centre seam as shewn in the drawing.

These three dimensions halved then read 1.70m., 2.50m., and 2.40m., respectively.

The three sides of the spinaker are: 7.00m. × 7.00m. × 4.80m. along the foot.

A tolerance of plus or minus 100 millimetres (3.15/16") is allowed on the quarter and half way cross measurements.



Official measurers will refuse to approve and sai[illegible]kers will refuse to make any sail which in their opinion does not conform