

INTERNATIONAL 470 MEASUREMENT CERTIFICATE INCLUDING MEASUREMENT FORM



(For Hulls Built According to the 1993 Building Specification)



| BOAT DETAILS | |
|------------------------------------|--|
| NATIONAL LETTERS | |
| OFFICIAL SAIL NUMBER | |
| Valid Sail Number(s) (C.R. A.10) | |
| Personal Sail Number (C.R. A.10.3) | |
| ISAF PLAQUE NUMBER | |

Authority: International Sailing Federation
Ariadne House, Town Quay, Southampton,
Hampshire SO14 2AQ,
United Kingdom

NOTE: This cover sheet shall be together with Measurement Certificate and Form.

PLEASE COMPLETE THIS FORM IN BLOCK CAPITALS.

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ISAF Plaque No.

OWNER'S DECLARATION

To be signed by the first owner:

I undertake to race this International 470 only so long as I maintain it in conformity with the Class Rules. I also undertake that only equipment which has been measured and found to be in accordance with the rules, will be used.

Name:

Address:

Date:

Signature:

MEASUREMENT CERTIFICATE

To be completed by the Certification Authority:

National Letters: Official Sail Number:

ISAF Plaque Number:Builder.....

Builder Plaque Number:Mould number:

Measurer's name :

This certificate is datedand its validity is confirmed

by for
(Block Capitals) (Name of Certification Authority)

Signature: Stamp of Authority:

Where the National Authority provides its own Measurement Certificate form, the above Measurement certificate may be replaced. In any case, the Measurement Certificate must be accompanied by a certified true copy of the Measurement Form.

Note: *Change of Ownership invalidates the Certificate. The new owner shall send the Measurement Form to his (her) own National Authority and apply for a new Certificate.*

ISAF Plaque No.

| ITEM No. | RULE No. | MEASUREMENT | MIN. (mm) | ACTUAL (mm) | | MAX. (mm) |
|-------------------------------|----------|--|-----------|-------------|-----|-----------|
| EXTERNAL SHAPE OF HULL | | | | | | |
| 1 | | Base line to keel | | | | |
| (a) | D3.2 | Transom | | | 230 | |
| (b) | | Station 1 | 174 | | | 182 |
| (c) | | Station 3 | 92 | | | 104 |
| (d) | | Station 5 | 54 | | | 68 |
| (e) | | Station 7 | 72 | | | 80 |
| (f) | | Station 8 | | | 114 | |
| 2 | | | | | | |
| (a) | D3.2 | 178mm minus actual measurement at Station 1 | -4 | | | +4 |
| (b) | | 98mm minus actual measurement at Station 3 | -6 | | | +6 |
| (c) | | 61mm minus actual measurement at Station 5 | -7 | | | +7 |
| (d) | | 76mm minus actual measurement at Station 7 | -4 | | | +4 |
| (e) | | Difference between maximum positive and maximum negative values of item 2(a) to 2(d) | | | | 10 |
| 3 | | Stem profile : | | MIN | MAX | |
| (a) | D | More than 420mm above baseline, stem profile Clearance | 10 | | | 30 |
| (b) | | Less than 420mm above baseline, stem profile Clearance | 0 | | | 15 |
| (c) | D | Sheerline height | -10 | | | +10 |
| (d) | | Vertical distance between FMP and AMP | | | | |
| 4 | D | Overall length of hull(excluding deck overlap) | 4690 | | | 4710 |
| 5 | | Clearance between template and hull below 420mm above the baseline at : | | MIN | MAX | |
| (a) | D | Transom | 5 | | | 15 |
| (b) | | Station 1 | 3 | | | 17 |
| (c) | | Station 3 | 3 | | | 17 |
| (d) | | Station 5 | 3 | | | 17 |
| (e) | | Station 7 | 3 | | | 17 |
| (f) | | Station 8 | 3 | | | 17 |
| 6 | | Difference between maximum and minimum clearances recorded in 5(a) to 5(f) at : | | | | |
| (a) | D | Transom | | | | 7 |
| (b) | | Station 1 | | | | 10 |

ISAF Plaque No.

| ITEM No. | RULE No. | MEASUREMENT | MIN. (mm) | ACTUAL (mm) | | MAX. (mm) |
|--------------------------------|----------|---|-----------|-------------|------|-----------|
| (c) | | Station 3 | | | | 10 |
| (d) | | Station 5 | | | | 10 |
| (e) | | Station 7 | | | | 10 |
| (f) | | Station 8 | | | | 10 |
| 7 (a) | D | Maximum clearance between the template and the hull above 420mm above the baseline at Station 3 | 13 | | | 39 |
| (b) | | Station 5 | 21 | | | 47 |
| (c) | | Station 7 | 30 | | | 56 |
| 8 | D. | Maximum clearance between the template and the hull above 520mm above the baseline at Station 8 | 15 | | | 41 |
| 9 (a) | D | Distance between the template and the gunwale rubbing strakes at: Transom | 0 | Port | Stbd | 35 |
| (b) | | Station 1 | 0 | | | 35 |
| (c) | | Station 3 | 0 | | | 35 |
| (d) | | Station 5 | 0 | | | 35 |
| (e) | | Station 7 | 0 | | | 35 |
| (f) | | Station 8 | 0 | | | 35 |
| 10 (a) | D | Sheer line heights relative to marks on the templates at: Transom | -10 | Port | Stbd | +10 |
| (b) | | Station 1 | -10 | | | +10 |
| (c) | | Station 3 | -10 | | | +10 |
| (d) | | Station 5 | -10 | | | +10 |
| (e) | | Station 7 | -10 | | | +10 |
| (f) | | Station 8 | -10 | | | +10 |
| 11 | | Recess of centreboard slot sealing: | | | | |
| (a) | Plan | Distance from edge of slot | 0 | | | 35 |
| (b) | | Depth from hull surface | 0 | | | 4 |
| 12 | Plan | Width of centreboard box slot | 25 | | | 35 |
| 13 | | Is the hull fair? | | Yes/No | | |
| DECK AND BUOYANCY TANKS | | | | | | |
| 14 | | Height of deck above sheer line at Station 7 | 0 | | | 75 |
| 15 | | Depth of foredeck hollow at curbing | 0 | | | 10 |
| 16 | | Foredeck centreline deviation from straight edge | 0 | | | 5 |

ISAF Plaque No.

| ITEM No. | RULE No. | MEASUREMENT | MIN. (mm) | ACTUAL (mm) | MAX. (mm) |
|--|----------|--|-----------|-------------|-----------|
| 17 | | Height of breakwater at centreline | 40 | | |
| 18 | | Distance from AMP to aft end of breakwater at : | | | |
| (a) | | centre line of hull | 3220 | | 3280 |
| (b) | | Sheer line | 2800 | | 2860 |
| 19 | | Side tank template clearance at Station 4 | 0 | | 35 |
| 20 | | Distance between side tanks at: | | | |
| (a) | | Transom | 550 | | 610 |
| (b) | | Station 4 | 800 | | 860 |
| (c) | | Station 6 | 740 | | 800 |
| 21 | Plan | Overall width of mast partners moulding | 0 | | 500 |
| 22 | | Dimension of hatches in forward bulkhead at forward end of cockpit : | | | |
| (a) | Plan | Height | 270 | | 330 |
| (b) | | Width | 270 | | 330 |
| 23 | Plan | Distance between inspection openings in forward bulkhead | 40 | | 100 |
| 24 | | Dimension of inspection holes in : | | | |
| (a) | Plan | buoyancy tanks | 110 | | 160 |
| (b) | | Hatch | 110 | | 160 |
| 25 | | Dimension of drain holes at : | | | |
| (a) | Plan | each side tank | 10 | | 25 |
| (b) | | Bulkhead | 10 | | 25 |
| 26 | Plan | Width of wooden gunwale rubbing strakes (if any) | 20 | | 30 |
| 27 | | Distance from ends of wooden rubbing strakes to (if any) : | | | |
| (a) | Plan | transom | 0 | | 50 |
| (b) | | stem | 0 | | 50 |
| INTERNAL MEASUREMENT & FITTINGS | | | | | |
| 28 | | Distance from AMP to: | | | |
| (a) | | Mainsheet track | 1610 | | 1650 |
| (b) | | Centre of attachment holes in the shroud plates | 2770 | | 2790 |
| (c) | | Centre of headsail attachment hole in stemhead fitting | 4615 | | 4645 |
| (d) | Plan | Aft end of mast partner | 2990 | | 3020 |
| (e) | Plan | Forward end of mast partner | 3160 | | 3190 |
| (f) | Plan | Radius of mast partner | 365 | | 385 |
| (g) | Plan | Width of mast partner | | | 500 |

ISAF Plaque No.

| ITEM No. | RULE No. | MEASUREMENT | MIN. (mm) | ACTUAL (mm) | MAX. (mm) |
|----------|----------|--|-----------|-------------|--------------------|
| 29 | | Height of mast step | 0 | | 5 |
| (a) | | | | | |
| (b) | | Mast step: Is there mark at 3055 from AMP? | | Yes/No | |
| (c) | Plan | Wood in keelson construction | | Yes/No | |
| (d) | Plan | Keelson aft end from bulkhead | 300 | | |
| (e) | Plan | Keelson forward end from bulkhead | 200 | | |
| 30 | | Centre of centreboard pivot: Distance from AMP | 2640 | | 2660 |
| (a) | | | | | |
| (b) | | Height above keel line | 92 | | 112 |
| 31 | Plan | Centreboard case: AMP to aft edge of centreboard slot at keel | 1575 | | 1585 |
| (a) | | | | | |
| (b) | | AMP to forward edge of centreboard slot at keel | 2755 | | 2765 |
| (c) | | AMP to aft edge of centreboard slot at capping | 1620 | | 1640 |
| d) | | AMP to forward edge of centreboard slot at capping | 2825 | | 2835 |
| 32 | Plan | Aft end of CB case to aft end of CB capping | | | 55 |
| 33 | Plan | Height of centreboard box above keel | 300 | | 330 |
| 34 | Plan | Centreboard capping: Width of centreboard capping | | | 200 |
| (a) | | | | | |
| (b) | | Radius between thwart and centreboard capping | | | 100 |
| 35 | | Non-transom track attached to top of centreboard box? | | Yes/No | |
| 36 | Plan | AMP to thwart centreline | 2350 | | 2450 |
| 37 | Plan | Width of thwart | | | 200 |
| 38 | Plan | Base of centreboard case to forward bulkhead | 170 | | 300 |
| 39 | Plan | Keelson section: Height | 30 | | 50 |
| (a) | | | | | |
| (b) | | Width | 30 | | 60 |
| 40 | Plan | Transom knee: Height | 110 | | 150 |
| (a) | | | | | |
| (b) | Plan | Length | 110 | | 150 |
| 41 | Plan | Section of tiller port cross piece: Height | 35 | | |
| (a) | | | | | |
| (b) | | Width | 20 | | |
| (c) | Plan | Aft flange extension beyond transom | | | 30 |
| 42 | Plan | Total area of tiller port and transom drainage holes | | | 0.07m ² |
| 43 | Plan | Forward bulkhead: AMP to top of forward bulkhead | 3220 | | 3280 |
| 44 | Plan | Forward bulkhead: AMP to base of forward bulkhead | 3200 | | 3240 |

ISAF Plaque No.

| ITEM No. | RULE No. | MEASUREMENT | MIN. (mm) | ACTUAL (mm) | MAX. (mm) |
|--------------------------|--|---|-----------|-----------------|-----------|
| HULL CONSTRUCTION | | | | | |
| 45 | Plan | AMP to reinforcement member: | | | |
| (a) * | | Member 600 from AMP | 550 | | 650 |
| (b) * | | Member 1100 from AMP | 1050 | | 1150 |
| (c) * | | Member 1630 from AMP | 1580 | | 1680 |
| (d) * | | Member 2000 from AMP | 1950 | | 2050 |
| (e) * | | Member 2300 from AMP | 2350 | | 2450 |
| (f) * | | Member 2780 from AMP | 2730 | | 2830 |
| 46 | Plan | FMP to reinforcement member: | | | |
| (a) * | | Member 400 from FMP | 350 | | 450 |
| (b) * | | Member 750 from FMP | 700 | | 800 |
| (c) * | | Member 1100 from FMP | 1050 | | 1150 |
| | | Sidetank longitudinal reinforcement | 2350 | | 2450 |
| | | Foretank, lower longitudinal reinforcement ref. plan | | Yes/No | |
| | | Foretank, upper longitudinal reinforcement ref. plan | | Yes/No | |
| | Plan | Hull diagonal reinforcement at shroud | | Yes/No | |
| | Plan | Deck diagonal reinforcement from mast partners | | Yes/No | |
| 47 | Plan | Reinforcement member section: | | | |
| (a) * | | Height | 30 | | 40 |
| (b) * | Width | 50 | | 60 | |
| 48 * | Plan | Is reinforcement trapezoidal in section? | | Yes/No | |
| 49 * | Plan | AMP to forward edge of keelson | 3600 | | |
| 50 | Plan | Flange width: | | | |
| (a) | | Keelson | 40 | | 100 |
| (b) | | Side tank | 40 | | 100 |
| (c) | Forward Bulkhead | 40 | | 100 | |
| 51(a) | Plan | Floor stiffener: Width | 0 | | 100 |
| (b) | | Height | 0 | | 30 |
| (c) | | Distance from AMP to aft end | | | 350 |
| 52 | Plan | Thwart | | | |
| (a) | | Height of thwart at side tank | 0 | | 100 |
| (b) | | Material of Vertical Reinforcement of Thwart: | | G.R.P / Plywood | |
| (c) | Thickness (GR.P: Min. 2.0mm / Plywood: Min. 4.0mm) | | | | |
| 53 | Plan | Does bulkhead under mainsheet track comply with remaining requirements? | | Yes/No | |
| (b) | | Materials: G.R.P / Plywood | | G.R.P / Plywood | |
| (c) | | Thickness (GRP: Min. 2 mm / Plywood: Min. 4 mm) | | | |
| 54 | Plan | Depth of optional capping under mainsheet track | 30 | | 50 |

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|--------------------|----------|--|-----------|--------------------|-----------|
| 55 | Plan | Is sidetank/foretank closure watertight and comply with plan including unidirectional reinforcement? | | Yes/No | |
| 56 (a) * | Plan | Does foretank web comply with remaining requirements? | | Yes/No | |
| (b) * | | Materials: Plywood / Wood / Foam with GRP | | Plywood /Wood /GRP | |
| (c) * | | Thickness (Plywood: Min. 4.0mm / Wood or Foam with Min. 1.0mm GRP skins) | | | |
| 57 | Plan | Is there foam block of required size in each side tank? (See Plan for Foam Block size) | | Yes/No | |
| 58 (a) | Plan | Hull Skin thickness | 1.5 | | |
| (b) | Plan | Cockpit floor skin thickness | 2.5 | | |
| (c) | Plan | Foredeck thickness | 1.3 | | |
| (d) | Plan | Sidetank thickness | 1.5 | | |
| (e) | Plan | Transom thickness | 1.5 | | |
| (f) | Plan | Forward bulkhead | 1.5 | | |
| 59 | Plan | Permanent mark on keelson at 3055 from AMP? | | Yes/No | |
| HULL WEIGHT | | | | | |
| 60(a) | D3.3. | Hull Weight including items specified in D.3.1 (a) 1, 2 &3 | 86 kg | | |

ISAF Plaque No.

BUILDER'S DECLARATION --- HULL

Builder's Name:

Builder's Serial Number:

Number of hull mould:

Date Built:

ISAF Plaque Number:

DECLARATION - To be signed by the builder.

I certify that:

- (a) This hull has been produced in the hull mould indicated.
- (b) This hull has been built in accordance with the spirit and letter of the Class Rules and constructed in accordance with the 1993 Building Specification with laminate detail in accordance with the Schedule submitted to the ISAF and approved by the ISAF.

Builder's signature: Date :

ISAF Plaque No.

MEASURER'S DECLARATION --- HULL

To be signed by the measurer(s):

I certify that I have taken all the measurements on this form and that, to the best of my knowledge, the hull conforms to the plans and rules of the International 470 Class at present in force, except as I have stated below. I also certify that an ISAF plaque was fixed to the hull,

Plaque Number:

Measurer 1:

Item numbers measured

Measurer's Comments:

Name: Officially recognised by:.....
(BLOCK CAPITALS) (NATIONAL AUTHORITY)

Signature: Date:

Measurer 2:

Item numbers measured

Measurer's Comments:

Name: Officially recognised by:.....
(BLOCK CAPITALS) (NATIONAL AUTHORITY)

Signature: Date:

ISAF Plaque No.

MEASURER'S DECLARATION --- HULL

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(BLOCK CAPITALS) (NATIONAL AUTHORITY)

Signature: Date:

Measurer 2:

Item numbers measured

Measurer's Comments:

Name:Officially recognised by:.....
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