

INTERNATIONAL 470

MEASUREMENT CERTIFICATE

INCLUDING MEASUREMENT FORM

(For Hulls Built According to the 1993 and later Building Specifications)



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

Authority: World Sailing
20 Eastbourne Terrace, Paddington, London
W2 6LG United Kingdom

NOTE: The Measurement Certificate shall be together with the Measurement Form.

PLEASE COMPLETE THIS FORM IN BLOCK CAPITALS.

© DECEMBER 2017, WS

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:

WS Plaque Number:Builder:.....

Builder Plaque Number:Mould number:

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.



WS 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)	D4.2	More than 420mm above baseline, stem profile Clearance	10			30
(b)		Less than 420mm above baseline, stem profile Clearance	0			15
(c)		Sheerline height	-10			+10
(d)		Vertical distance between FMP and AMP				
4	D3.2	Overall length of hull(excluding deck overlap)	4690			4710
5		Clearance between template and hull below 420mm above the baseline at :		MIN	MAX	
(a)	D4.3	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)	D4.3	Transom				7
(b)		Station 1				10



WS 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)	D4.3	Maximum clearance between the template and the hull above 420mm above the baseline at Station 3	9			35
		(b) Station 5	18			44
		(c) Station 7	28			54
8	D4.3	Maximum clearance between the template and the hull above 520mm above the baseline at Station 8	15			41
9 (a)	D4.3	Distance between the template and the gunwale rubbing strakes at: Transom	0	Port	Stbd	35
		(b) Station 1				
		(c) Station 3				
		(d) Station 5				
		(e) Station 7				
		(f) Station 8				
		10 (a)		D4.3	Sheer line heights relative to marks on the templates at: Transom	
(b) Station 1						
(c) Station 3						
(d) Station 5						
(e) Station 7						
(f) Station 8						
11 (a)	Plan		Recess of centreboard slot sealing: Distance from edge of slot		0	
		(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



WS 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



WS 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			0.07 m 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



WS 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 2400 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	0		100
(a)		Height of thwart at side tank			
(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	
(a)					
(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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ITEM No.	RULE No.	MEASUREMENT	MIN. (mm)	ACTUAL (mm)	MAX. (mm)
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		



WS Plaque No.

BUILDER'S DECLARATION --- HULL

Builder's Name:

Builder's Serial Number:

Number of hull mould:

Date Built:

WS 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 WS and approved by WS.

Builder's signature: Date :



WS 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 a WS fee 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:



WS Plaque No.