SUI sailing

Schweizerischer Segelverband - Fédération Suisse de Voile
Federazione Svizzera della Vela - Federaziun Svizra da Vela
Swiss Sailing Federation

MEASUREMENT CERTIFICATE

Dieser Vemessungsnachweis ist der im Art. 78 WR angeforderte
Ce certificat est le document exigé selon l'article 78 RIC
Questo certificato è il documento richiesto secondo l'articolo 78 RIC
Quaist certificat ais il documaint stipulieu seguond l'artichel 78 da l'WR
This form is the certificate required as per International Sailing Federation RRS 78

Sail endorsement	All sails used when racing shall have been measured by an SWS approved measurer who shall have stamped, signed and dated each sail at its tack.
Owners Declaration	I undertake to race this FINN only so long as I maintain it to conform with the International FINN Class Rules. *Owners Signature*

Class **FINN**

Builder **Wilke (SUI)**

ISAF Plaque N° **4240**

Measurer **B Reichen (SUI 8)**

Appointed by SWISS SAILING

Date of 1st measurement **30. Juli 2014**

Sail N° when 1st measured **SUI 566**

Hull Weight (kg) **116.000**

Number of CW (pces) **2**

CB weight (kg) **12.600**

Corrector weight (kg) **5.000**

T1 / T2 (sec) **3.1897/3.5608**

Corrector weights can only be altered or removed by an official FINN Class Measurer

Sail N° **SUI - 566**

Personal Sail N° **SUI - 3**

Registered by SWISS SAILING

Im Swiss Sailing-Register eingetragen am
13. AUG. 2014

Not valid without SWISS SAILING *Stamp*

SWISS SAILING *Member N°*
AE 33364

Owner

Name	**Lazzari**
First Name	**Carlo**
Address	**Rosenweg 63**
Code - City	**3645 Gwatt**
Nation	**Switzerland**
Club	**TYC**

Registered by: Urs Wyler 12. August 2014

MEASUREMENT CERTIFICATE

This forms Page 1 of the certificate required under ISAF RRS 78

INTERNATIONAL FINN CLASS

Regatta Identification (to be completed by the Helmsman)

SAIL NUMBER IN USE *Print*	SUI 3
SAIL NUMBER (Rule A.10.2) *Print*	SUI 566
ISAF STICKER NUMBER *Print*	4246
HELMSMAN *Print*	Carlo Lazzari Rosenweg 63 3645 Gwatt Switzerland
HELMSMAN'S DECLARATION I am satisfied that the Certificate for this boat is valid and that the boat complies with the Class Rules. In particular, all equipment to be used complies with the requirements of Section C of the Class Rules. *Sign and date*	

This page shall be completed by the Helmsman, who shall alter or replace it as necessary.
Replacement pages and "Reweighing" Attachment Sheets can be downloaded from the ISAF website at Finn Class Documents.
Please use a laser printer or photocopier (the ink is more resistant to damp).

ATTACHMENT SHEETS

Changes to the information on page 2 shall be recorded. If there is insufficient space, use additional copies of these pages or the "Reweighing" Form as Attachment Sheets. Retain the original sheets, with obsolete information crossed through.

Geprüft durch:
SWISS SAILING
Tech Zentrale Jollen
Urs Wyler
8.8.14

Please use Black Ink

Im Swiss Sailing-Register eingetragen am
13. AUG. 2014

19 June 2009

MEASUREMENT CERTIFICATE

This is page 2 of the certificate required under ISAF RRS 78

INTERNATIONAL FINN CLASS

Identification and Certification (Hull and Centreboard)

SAIL N°
(Rule A.10.2) SUI 56C

ISAF Sticker No	4240	Builder	Wilke
Other Hull Identifying Numbers	CH-WILF 5010 3G414	Date completed	30 July 2014
Date of this measurement	30 July 2014	Date of first measurement	30 July 2014
Corrector weights Position 300 Amount 4.0 kg	(Include dist from Stn.0) 3070 Amount 1.0 kg	Position – Amount kg	Position – Amount kg
Fittings etc. such as Compass (not Digital), Hiking pads. Item weight not required. Hiking pads, breakwater			
Centreboard Certification Mark and Unique Number	C4240	Weight of hull plus centreboard	116.0 kg
Weight of Centreboard	12.6 kg	λ from Stn 0 to C of G	2100 mm
T_1	3.1897 sec	**d** (App.H.3)	872 mm
T_2	3.5608 sec	**a** (App.H.3)	655 mm
Radius of gyration ρ	1107.3 mm	**h** CG above underneath of hull	217 mm
Official Measurer (Please print)	Reichen	Appointed by	SWISS SAILING Measurer No 08 Beat Reichen
Hull and Centreboard comply with **fundamental measurement** requirements.		Official Measurer (Please sign)	

Registered by Certifying Authority:

Im Swiss Sailing-Register eingetragen am
13. AUG. 2014
Stamp and date of registration

OWNER

Name Carlo Lazzari
Address Roseweg 63
City Gwatt
Code 3645
Nation Switzerland
Club TYC

Please use Black Ink

19 June 2009

Geprüft durch:
SWISS SAILING
Tech Zentrale Jollen
8.8.14 Urs Wyler

INTERNATIONAL FINN CLASS MEASUREMENT FORM
2011 Edition
To be used in conjunction with the Class Rules and the Measurement Certificate (Hull and Centreboard)

ISAF Sticker Number 4240

Official Measurer for Section D (hull with centreboard)			
Date	Please Print Name	Signature	Appointed by
30 July 14	Reichen		SWISS SAILING Measurer No 08 Beat Reichen

Official Measurer for the centreboard (Sections E.1 and E.2 except E.2.5 (b))			
Date	Please Print Name	Signature	Appointed by
30 July 14	Reichen		SWISS SAILING Measurer No 08 Beat Reichen

Hull Templates						
Identifier	0	2	4	6	8	Stem
	←		Swiss	Sailing	→	

IDENTIFICATION AND GENERAL			
Item	**Rule**	**Entry**	**Requirement**
ISAF Sticker attached to hull	D.2.4	4240	Enter number, (also at top of form)
Other Identifiers		CH-WILF 50103 G414	Number & Place of numbers moulded in hull etc
Boat complete as for Swing Test	D.9.2 (a)	complies	"Complies"
Hull Materials	D.3.1	GRP complies	Description/ "Complies"
Hull Construction	D.3.2 & diagrams	complies	"Complies"

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HULL BOTTOM UP					
Item	Rule	< (min)	Entry	< (max)	Requirement
Hull length	D.9.1	4480<	4510	<4510	Number, mm
Transom forward of Station 0:	"		0	<5	Number, mm
No hollows, knuckles or chines	D.3.2 (e),(f)		complies		"Complies"
Baseline below hull shell: at station 1	D.9.1 & diagrams	147<	155	<157	Number, mm
at station 2	D.9.1	99<	110	<119	Number, mm
at station 4	"	35<	37	<55	Number, mm
at station 6	"	6<	10	<26	Number, mm
Stem profile (outside stem band) to template:	D.9.1 & diagram		5	<10	Number, mm
Sheer above position marked on stem template:	D.9.1 & diagram	-10<	-9	<+10	+ Number means more freeboard
Keel band and Stem band construction	D.8 & diagram		comply		"Comply"
Keel band Section radius	D.9.1	6, half round<	6		Number, mm
Stem band (for'd of Section 8) radius	"	6<	6		Number, mm
Centreboard case construction	D.3.2 (c)(d)(e)		complies		"Complies"
Centreboard Case slot width	D.9.1	8<	10	<12	Number, mm
Centre of centreboard pivot pin above underside of keel	"	40<	50	<50	Number, mm
Fore and aft adjustment for centreboard pivot pin	"		5	<20	Number, mm

SECTION TEMPLATES							
Item	Rule	Entry					Requirement
		< (min)	Port	< (max)	< (min)	Starboard	< (max)	
Hull shell to hull template: at station 0	D.9.1 & diagram		10	<10		10	<10	Number, mm
at station 2	"		10	<10		9	<10	Number, mm
at station 4	"		10	<10		10	<10	Number, mm
at station 6	"		10	<10		10	<10	Number, mm
at station 8	"		9	<10		9	<10	Number, mm
Sheerline above position marked on template: at station 0	D.9.1 & diagram	-10<	-7	<+10	-10<	-7	<+10	+ Number means more freeboard
at station 2	"	-10<	10	<+10	-10<	10	<+10	Number, mm
at station 4	"	-10<	9	<+10	-10<	9	<+10	Number, mm
at station 6	"	-10<	6	<+10	-10<	6	<+10	Number, mm
at station 8	"	-10<	0	<+10	-10<	0	<+10	Number, mm

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SWISS SAILING
Measurer No 08
Beat Reichen

DECK AND COCKPIT					
Item	**Rule**	**< (min)**	**Entry**	**< (max)**	**Requirement**
Deck General Arrangement	D.4.1		complies		"Complies"
Length of foredeck	D.9.1 & diagram	1350<	1350	<1450	Number, mm
Length of aft deck		550<	650	<650	Number, mm
Distance between side decks or built in tanks and the centreplane: at station 2	D.4, diagram & D.9.1	410<	430		**Minimum Half-width** Number, mm
at station 3	"	500<	500		Number, mm
at station 4	"	490<	490		Number, mm
at station 5	"	440<	440		Number, mm
Distance between side decks or built in tanks and the centreplane, at some point between the **sheerline** and 100 mm below the **sheerline:** At Station 2	D.4, diagram & D.9.1		435	<520	**Maximum Half-width** Number, mm
at station 3	"		505	<560	Number, mm
at station 4	"		495	<550	Number, mm
at station 5	"		455	<500	Number, mm
Top of the deck at centreplane above the **sheer** at station 0	"	45<	45	<55	Number, mm
Top of the deck at centreplane above a straight line between the stemhead and station 0	D.4, diagram & D.9.1	-10<	complies	<+10	"Complies"
Pads or recesses to mount or locate fittings	D.4.1 (d), D.9.1	-10<	complies	<+10	"Complies"

DECK AND COCKPIT DETAILS					
Item	**Rule**	**< (min)**	**Entry**	**< (max)**	**Requirement**
Number of buoyancy units	D.5.2	4<	4		Number, "Complies"
Construction of buoyancy units	D.5.2		complies		"Complies"
Buoyancy Inspection and Testing	D.5.3 D.9.1		satisfied		Details of any tests carried out. "Satisfied".
Gunwale Rubbing Strakes	D.6 & diagram, D.9.1		complies		"Complies"
G.R.S. depth (down from the sheerline around the hull)		20<	20	<35	Number, mm
" width (at a right angle to the shell)		20<	25	<25	Number, mm

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Im Swiss Sailing-Register eingetragen am
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DECK AND COCKPIT DETAILS			
Item	**Rule**	**(min) < Entry < (max)**	**Requirement**
Floorboard/Double Bottom construction	D.7	complies	"Complies"
Width of floorboards at station 2	D.7, D.9.1	800< 860	Number, mm
at station 3	"	880< 1000	Number, mm
at station 4	"	720< 980	Number, mm
Floorboards or double bottom below sheer at station 2	D.7, D.9.1	285< 290	Number, mm
at station 3	"	325< 345	Number, mm
at station 4	"	375< 400	Number, mm
(if fitted) at station 5	"	375< 413	Number, mm
(if fitted) at station 6	"	390< 425	Number, mm
Thwart depth	D.9.1	16< 26 <50	Number, mm
" width	"	70< 80 <80	Number, mm
" aft side forward of station 0	"	1950< 2050 <2050	Number, mm
Top of thwart below sheer	"	50 <130	Number, mm
Overall width of centreboard case	"	100 <100	Number, mm
Mainsheet traveller block: Travel from centreplane of boat	"	540 <550	Number, mm
Travel forward of station 4	"	100 <150	Number, mm
Distance from mast heel to underside of keel band	"	40 <56	Number, mm
Mast bearing surface above deck	"	0 <10	Number, mm
Horizontal play in mast bearings (not play between mast and bearing)	"	Upper 5 <5 Lower 0 <5	Number, mm
Fittings to have a reasonable weight	C.7.3 (e) (4)	complies	"Complies"
Fittings information recorded on certificate if necessary	C.7.3 (e) (5)	complies	"Entered" or "N/A"

TRANSOM DETAILS			
Item	**Rule**	**(min) < Entry < (max)**	**Requirement**
Holes, Number & Diameter	D.9.1	complies	"Complies"
Bearing at Pintle above **hull datum point**	"	52< 54 <57	Number, mm
Bearing at Gudgeon above **hull datum point**	"	262< 267 <267	Number, mm
Axis of Pintle aft of Station 0 (α)	"	10< 20 <30	Number, mm
Axis of Gudgeon aft of Stn. 0 (β)	"	10< 22 <30	Number, mm
Difference between (α) and (β)	"	0< 2 <2	Number, mm
Dia. of Pintle & Gudgeon Hole	"	7.9< 8 <8.1	Number, mm

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CENTREBOARD					
Item	Rule	< (min)	Entry	< (max)	Requirement
Centreboard identifying number	E.2.2 (a)		C 4240		Number
Centreboard materials	E.2.3		complies		"Complies"
Centreboard arm complies with diagram requirements	E.2.5 (a) & diagram		complies		"Complies"
Centreboard large radius	"	885<	895	<895	Number, mm
" small radius	"	30<	30	<40	Number, mm
" chord length	"	815<	825	<825	Number, mm
" nominal thickness	"	8<	8	<8	Number, mm
" edge shaping distance	"		25	<25	"Complies"
Centreboard Mass including buffer stop	E.2.4 (a)(1) E.2.6	11·0<	12,600	<13·0	Number, kg
Certification mark fixed, signed & dated	E.2.2		complies		"Complies"

HULL WITH CENTREBOARD					
Item	Rule	< (min)	Entry	< (max)	Requirement
Centreboard hole diameter larger than pivot pin diameter	E.2.5 (b)		0	<2	Number, mm
Centreboard theoretical reference point below hull shell	"		700	<700	
Hull datum point to centreboard (pivot pin at maximum aft position)	"	2050<	2050		
Centreboard projection below hull shell when fully raised	"		none		"None"
Centreboard Certification Mark details and number entered on Measurement Certificate (Hull and Centreboard)	D.2.1		complies		"Entered"
Correct condition for weighing	D.9.2 (a)		complies		"Complies"
Mass of hull and centreboard	D.9.2 (b)	116·0<	116.0		Number, kg
Mass of correctors	D.9.4 (b)		4/ 5,000	<5·00	Number, kg
Period of oscillations	D.9.3(b)(iii)	T_1 3.1897	T_2 3.5608		sec, 3 decimals
Distance λ from Stn 0 to C of G	D.9.3 (c)	2100<	2100	<2290	Number, mm
C of G above underneath of hull	"	210<	217		Number, mm
Radius of gyration ρ	"	1100<	complies		"Complies"
Corrector weights securely fastened	D.9.4 (a)		complies		"Complies"
Corrector and other weight details entered on certificate	D.9.4 (b)		entered		"Entered"

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Urs Wyler
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SWISS SAILING
Measurer No 08
Beat Reichen

Im Swiss Sailing-Register eingetragen am
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MEASUREMENT CERTIFICATE

This is an attachment to the Measurement Form and the Certificate required under ISAF RRS 78

INTERNATIONAL FINN CLASS

Reweighing

SAIL N°
(Rule A.10.2)

ATTACHMENT SHEETS

Changes to the information on page 2 of the Certificate shall be recorded. If there is insufficient space, use additional copies of page 2 or the "Reweighing" Form as Attachment Sheets. Retain the original sheets, with obsolete information crossed through.

ISAF Sticker No		Other Hull Identifying Numbers	
Date of this measurement		Date of first measurement	
Corrector weights Amount kg	(Include dist from Stn.0) Amount kg	Position Amount kg	Position Amount kg
Fittings etc. such as Compass (not Digital), Hiking pads. Item weight not required.			
Centreboard Certification Mark and Unique Number		Weight of hull plus centreboard	kg
Weight of Centreboard	kg	λ from Stn 0 to C of G	mm
T_1	sec	**d** (App.H.3)	mm
T_2	sec	**a** (App.H.3)	mm
Radius of gyration ρ	mm	**h** CG above underneath of hull	mm
Official Measurer (Please print)		Appointed by	
Items remeasured comply with **fundamental measurement** requirements.		Official Measurer (Please sign)	

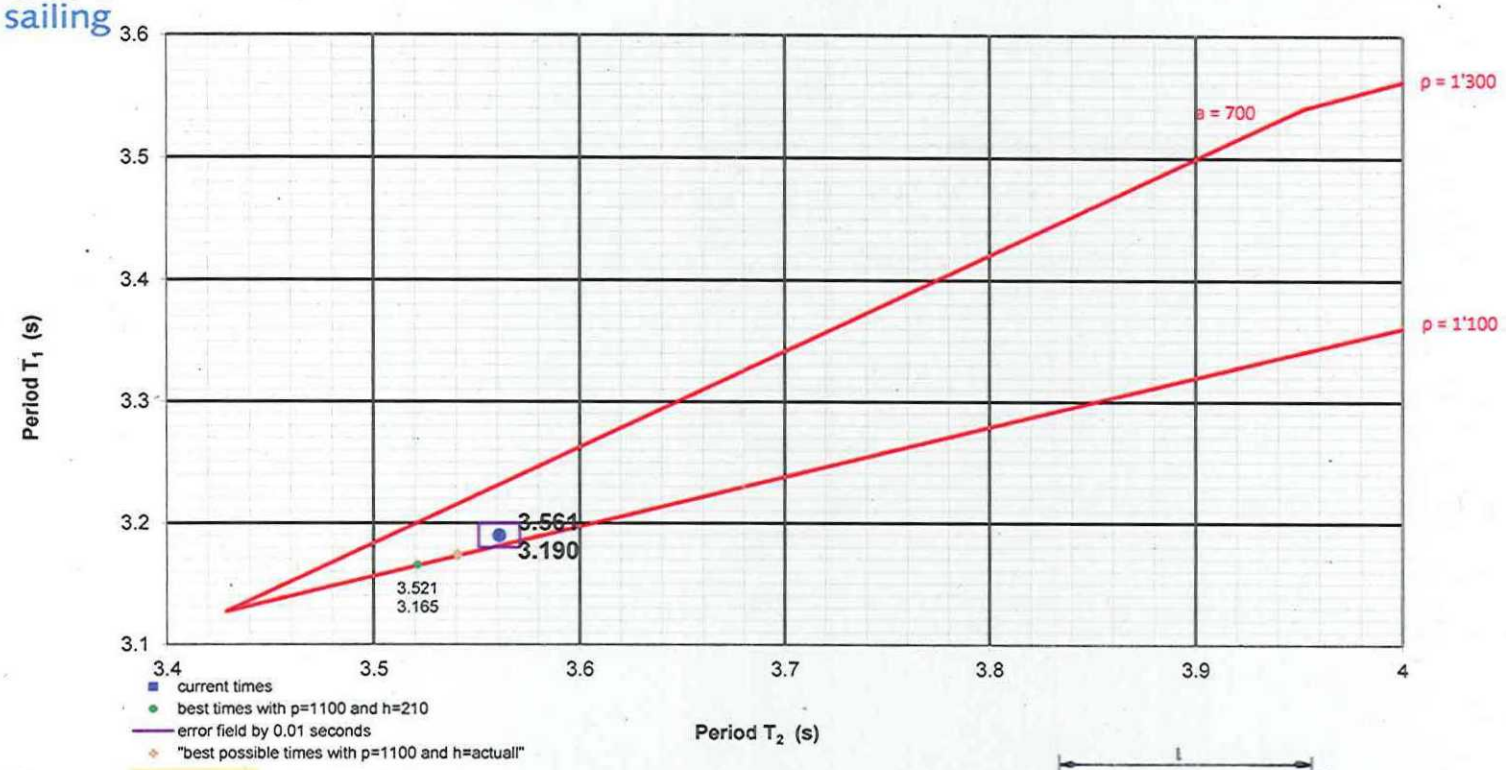
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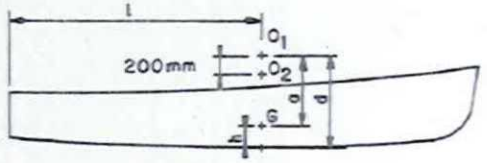
19 June 2009

SUI sailing

Period T_1 vs. Period T_2



		T_1	T_2			
ISAF:	**4240**	3.190	3.561			
		ρ	h	a	d	λ St0 to CG
Weight:	116.000	1'107.375	217	655	872	2'100
	>116	>1100	>210			2100-2290



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9.8042

Correctors:		
Amount kg	4.000	1.000
Position (St0) mm	300	3070

Temperature	Pressure (QFE)	Humidity	Height above sealevel	Density (site)	Difference to ISA-Density site	Density (normal conditions, laboratory conditions; T_{20}, 1013hPa)			
22	945.9	69%	563	1.109	-4.42%	1.204	Dry Air	1.204	Humidity
°C	hPa		m	kg/m³	kg/m³	kg/m³		kg/m³	69%
QFF	1'008.7							QFF	1'013.2
difference drag to Southampton (ISA dry air)						5.09%			

ISA Leissigen: 11.34°C, 947.43 hPa, 0% rH

Time measuring device: TAG Heuer Minitimer HL440, Photocell Hesotec AG "Budget"

TAG Heuer EVOLVE SOFT CONTROL

Geprüft durch:
SWISS SAILING
Tech Zentrale Jollen
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8.8.14

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This document is not a part of the measurement certificate/form!