

12



INTERNATIONAL TWELVE METRE CLASS

Yacht's Name Onawa

National letters and Sail Number US 6 Club New York Yacht Club

Designer Burgess, Rigg and Morgan Ltd.

Builder Aberking & Rasmussen Building Year 1928

Owner Earl McMillen III

Owner's Address PO Box 1495 Newport, RI 02840 USA

Lloyds R class certificate (Number or Date) _____

RATING CERTIFICATE

This yacht has been measured by measurer(s) appointed by the International Twelve Metre Association and has been found to rate not more than 12.000 metres.

This certificate is dated: 9-Jun-21

Measurer A Williams Signature Ander

Valid until 9-Jun-23

Supersedes 16-Jul-07

Is this an **Appendix E** Certificate? Y / N **yes**

Was **Appendix F** used for Measurement? Y / N **yes**

Signature
ITMA Technical Director



Stamp of Authority of the
International Twelve Metre Association

RATING CALCULATION

OVERALL LENGTH			20.854
Overhang Forward to FGS	2.930		
Overhang Aft to AGS	2.395		
Total Overhang (Subtract)	5.325		
MEASURED LENGTH (L_{BG})			15.529
Girth at Bow	1.757		
Twice vertical Height at Bow (Subtract)	1.200		
Girth Difference at FGS	0.557		
Add 1.5 x Girth Difference at FGS (min 0.540 m)	0.836		
Girth at Stern	3.228		
Twice vertical Height at Stern (Subtract)	1.660		
Girth Difference at AGS	1.568		
Add 1/3 Girth Difference at AGS (min 0.400 m)	0.523		
Add any penalty (Beam or Displacement)			
Sum of Length and Girth Corrections			16.887
Age/Design Correction Factor (ADCF)(see page 3)	0.9550		
LENGTH (L)			16.127
Skin IM to d1 Port	2.142		
Chain IM to d1 Port	2.141		
d Port	0.001		
Skin IM to d1 Starboard	2.160		
Chain IM to d1 Starboard	2.159		
d Starboard	0.001		
Add d	0.002		
Add GIRTH 2 d			0.004
	Datum Sta.	Actual Sta.	Rating FB
Mean Freeboard Bow		1.319	1.319
Mean Freeboard Midship		0.978	0.978
Mean Freeboard Stern		1.010	1.010
Sum of Freeboards			3.307
Subtract FREEBOARD, F			<i>See note</i>
Add SAIL AREAS (Square root)			1.102
TOTAL OF MEASUREMENTS			13.410
TOTAL OF MEASUREMENTS			28.439
PENALTY (Draft or Tumblehome)		0.000	0
RATING			12.000

Date and Place of Measurement

9-Jun-21

Measurer's Name(s)

A Williams

Signature



Yacht's name : Onawa		Date	9-Jun-21
Range Measurement (Yes or No)	Yes	Date:	April 2017

PENALTIES

Overhang Forward to MWL	3.530		
Overhang Aft to MWL	2.976		
Subtract from overall length	6.506		
Difference of immersion from salt to fresh water	Meas. Density		1.025
WATERLINE LENGTH (LWL)			14.348
Minimum Displacement for Zero Penalty [m3]	27.533		
Minimum Weight for Zero Penalty [tonnes] (Water of sg 1.025)	28.221		
WEIGHT [tonne] Actual weight			28.250
Equivalent LWL (for Displ. < min.)	14.353		
Difference	0.005		
DISPLACEMENT PENALTY (add to L)			0.000
Displacement Determination Method			
DRAFT (actual)	2.752		
Max. Draft for Zero Penalty	2.796		
Difference (if positive)			
DRAFT PENALTY (add to Rating)	Appendix E		0.000
BEAM (Min)	3.680		
Max Beam at 1/3 of Midship Freeboard	0.000		
Difference (if positive)	0.000		
BEAM PENALTY (add to L)			0.000
Tumblehome Max. (2 x 2% of Extr. Beam)	0.000		
Extreme Beam	3.690		
Beam at deck	3.690		
Difference (if positive)	0.000		
TUMBLEHOME PENALTY (add to Rating)			0.000

Date and Place of Measurement	9-Jun-21	
Measurer's Name(s)	A Williams	Signature <i>Ander</i>

Design/Age Correction Factor Calculation		
Age Date	1928/1939	
ADCF (Table E-2)	0.9550	
Hull Alteration Scope and Date		
Appendage Change Scope and Date		
Change/Alteration Correction ADCF		
Accommodation Deficiency Ballast		

Yacht's name : Onawa

Date

9-Jun-21

SAIL PLAN

Max Height of Sail Plan =	<input type="text" value="25.000"/>	J=	<input type="text" value="7.030"/>	I =	<input type="text" value="18.740"/>
Boom above Mast Datum =	<input type="text" value="1.230"/>	P=	<input type="text" value="23.770"/>	E=	<input type="text" value="10.650"/>
Rated Mainsail Area	<input type="text" value="126.575"/>	Spi boom=	<input type="text" value="7.030"/>	√S=	<input type="text" value="13.410"/>
J used for Rating			<input type="text" value="7.030"/>		
Rated Foretriangle Area	<input type="text" value="55.990"/>	Propeller allowance			<input type="text" value="0.985"/>
TOTAL RATED SAIL AREA (S)	<input type="text" value="182.566"/>	Corrected sail area			<input type="text" value="179.827"/>

SAIL LIMITS

Mainsail max girth:	1/2 height (68% of E)	<input type="text" value="7.242"/>	3/4 height (41% of E)	<input type="text" value="4.367"/>
Genoa:	max. foot length (J + 4.8m)	<input type="text" value="11.830"/>		
Spinnaker:	1/2 foot max breadth (125% J)	<input type="text" value="8.788"/>	max. luff length=	<input type="text" value="18.512"/>

Spar Measurement

MAST (material)	<input type="text" value="Wood"/>	Mast Weight	<input type="text" value="510"/>	CG pos.	<input type="text" value="10.445"/>
	Deck	Half-Height	Jib-Halyard	Head	
Mast dimensions [mm]	<input type="text" value="354 x 260"/>	<input type="text" value="350 x 255"/>	<input type="text" value="284 x 240"/>	<input type="text" value="194 x 145"/>	
Sections area [cm ²]	<input type="text" value="723"/>	<input type="text" value="701"/>	<input type="text" value="535"/>	<input type="text" value="221"/>	
Mast CG Correction (if applicable) Wt & CG	<input type="text" value="@"/>		Mk ²	<input type="text" value=""/>	

Engine/Propeller Installation

Engine and propeller weight	<input type="text" value="Yes"/>	Propeller diameter =	<input type="text" value="0.525"/>
Minimum boat speed with engine	<input type="text" value="Yes"/>	Propeller position =	<input type="text" value="Not Skewed"/>
Propeller Type (folding feathering fixed pitch etc.), no of blades		Feathering	<input type="text" value="3.000"/>
Propeller Skew			<input type="text" value=""/>

Flotation

Internal Ballast	Amount	Location aft of bow
None		

Measurer's Notes

- 1 Full fitout below
- 2 Re configured draft 2009

Date and Place of Measurement

9-Jun-21

Measurer's Name(s)

A Williams

Signature

