



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) _____

APPENDIX "E" 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 July 7, 2009

Measurer A Williams Signature *A Williams*

Valid until July 7, 2011

Supersedes July 16, 2007



Signature *K. Williams*
ITMA Technical Director

Stamp of Authority of the
International Twelve Metre Association

CERTIFICATE REVALIDATION

This yacht has been declared by the Owner to be unchanged from her previous revalidated certificate dated July 7, 2009. Accordingly this certificate has been revalidated and remains valid until July 22, 2013 subject to a successful flotation being carried out by a class measurer prior to racing .

Signature *K. Williams* July 22, 2011
ITMA Technical Director

RATING CALCULATION

OVERALL LENGTH

20.854

Overhang Forward to L1

2.930

Overhang Aft to L1

2.395

Total Overhang (Subtract)

5.325

MEASURED LENGTH (L1 L1)

15.529

Girth at Bow

1.757

Twice vertical Height at Bow (Subtract)

1.200

O at Bow

0.557

Add 1 1/2 O at Bow (min 0.540 m)

0.836

Girth at Stern

3.228

Twice vertical Height at Stern (Subtract)

1.660

O at Stern

1.568

Add 1/3 O at Stern (min 0.400 m)

0.523

Add any penalty (Beam)

0.000

Sum of Length and Girth Corrections

16.887

Age Date and Allowance

1928/1939

Allowance

0.955

CORRECT LENGTH L

16.127

Skin d to d1 Port

2.142

Chain d to d1 Port

2.141

d Port

0.001

Skin d to d1 Starboard

2.160

Chain d to d1 Starboard

2.159

d Starboard

0.001

Add d

0.002

Add GIRTH 2 d

0.004

Mean Freeboard Bow O

Actual

1.319

1.319

Mean Freeboard Midship d

Actual

0.978

0.978

Mean Freeboard Stern O

Actual

1.010

1.010

Sum of Freeboards

3.307

Subtract FREEBOARD, F

See Notes

1.102

Add SAIL AREAS (Square root)

13.410

TOTAL OF MEASUREMENTS

28.439

PENALTY (Draught)

0.000

RATING

12.000

Date and place of Measurement

July 7, 2009

Measurer's Name(s)

A Williams

Signature



PENALTIES

Overhang Forward to L	3.530	
Overhang Aft to L	2.976	
Subtract from overall length	6.506	
Difference of imersion from salt to fresh water	0.000	
WATERLINE LENGTH		14.348
Minimum Displacement for Zero Penalty [m3]	27.533	
Minimum Weight for Zero Penalty [tonnes] (Water of sg 1.025)	26.517	
ACTUAL WEIGHT [tonnes]		Append E
Equivalent LWL (for Displ. < min.)		
Difference		
DISPLACEMENT PENALTY (add to L)		Append E
DRAUGHT (actual)	2.752	
Max. Draught for Zero Penalty	2.796	
Difference (if positive)		
DRAUGHT PENALTY (add to Rating)		0.000
BEAM (Min)	3.680	
Max Beam at 1/3 of Midship Freeboard	3.600	
Difference (if positive)	0.080	
BEAM PENALTY (add to L)		0.000
Tumblehome Max. (2 x 2% of Extr. Beam)	0.148	
Extreme Beam	3.690	
Beam at deck	3.673	
Difference (if positive)	0.017	
TUMBLEHOME PENALTY (add to Rating)		0.000

Date and place of Measurement
 Measurer's Name(s)

July 7, 2009
 A Williams

Signature

Ander

SAIL PLAN

Max Height of Sail Plan =	25.000	J=	7.030	I =	18.740
Boom Height =	1.230	A=	23.770	B=	10.650
Rated Mainsail Area	126.575	Spi boom=	7.030	√S=	13.410
Rated Foretriangle Area	55.990	Propeller allowance	0.985		
TOTAL RATED SAIL AREA	182.566	Corrected sail area	179.827		

SAIL LIMITS

Mainsail max girth:	1/2 height (68%)	7.242	3/4 height (41%)	4.367
Genoa:	max. foot length (J + 4.8m)	11.830		
Spinnaker:	1/2 foot max breadth (125% J)	8.788	max. luff length=	18.512

Spar Measurement

MAST (material)	Wood	Mast Weight	510	CG pos.	10.445
Mast dimensions [mm]	Deck 260 x 354	Half-Height 255 x 350	Jib-Halyard 240 x 284	Head 145 x 194	
Sections area [cm ²]	723	701	535	221	

Engine/Propeller Installation

Engine and propeller weight	Yes	Propeller diameter =	0.525	
Minimum boat speed with engine	Yes	Propeller position =	Not Skewed	
Engine model and power	Yanmar 75 hp			

Flotation

Internal Ballast	220 kg	@ J +3m	

Measurer's Notes

Full fitout below	
Re-configured to deeper draft 2009	

Date and place of Measurement	July 7, 2009	Portsmouth RI USA	
Measurer's Name(s)	A Williams	Signature	