

12

INTERNATIONAL TWELVE METRE CLASS

Yacht's Name *Freedom*

National letters and Sail Number *US 30* Club *NYYC*

Designer *Sparkman & Stephens*

Builder *Minnefords* Building Year *1979*

Owner *Mr Takashi Okura*

Owner's Address *200 West Grand Avenue,
Montvale, NJ 07645 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: June 3, 2022

Measurer A Williams Signature *Ander*

Valid until June 3, 2024

Supersedes June 3, 2019

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

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

Hull Scanned

Signature *K. Williams*

ITMA Technical Director



Stamp of Authority of the
International Twelve Metre Association

RATING CALCULATION

OVERALL LENGTH

Overhang Forward to FGS
 Overhang Aft to AGS
 Total Overhang (Subtract)

1.904
2.099
4.003

19.349

MEASURED LENGTH (L_{BG})

Girth at Bow
 Twice vertical Height at Bow (Subtract)
 Girth Difference at FGS
 Add 1.5 x Girth Difference at FGS (min 0.540 m)
 Girth at Stern
 Twice vertical Height at Stern (Subtract)
 Girth Difference at AGS
 Add 1/3 Girth Difference at AGS (min 0.400 m)
 Add any penalty (Beam or Displacement)
 Sum of Length and Girth Corrections
 Age/Design Correction Factor (ADCF)(see page 3)

1.573
1.200
0.373
0.560
3.323
1.634
1.689
0.563

15.346

0.9900

16.469

LENGTH (L)

Skin IM to d1 Port
 Chain IM to d1 Port
 d Port
 Skin IM to d1 Starboard
 Chain IM to d1 Starboard
 d Starboard
 Add d

2.169
2.157
0.012
2.164
2.155
0.009
0.021

16.304

Add GIRTH 2 d

Mean Freeboard Bow
 Mean Freeboard Midship
 Mean Freeboard Stern
 Sum of Freeboards

Datum Sta.	Actual Sta.	Rating FB
	1.186	1.186
	0.995	0.988
	0.997	0.978
		3.152

0.042

Subtract FREEBOARD, F

1.051

Add SAIL AREAS (Square root)

13.131

TOTAL OF MEASUREMENTS

28.426

PENALTY (Draft or Tumblehome)

0.000

0

RATING

11.994

Date and Place of Measurement

03-Jun-22

Measurer's Name(s)

A Williams

Signature



Yacht's name : Freedom		Date	03-Jun-22
Range Measurement (Yes or No)	no	Date:	April 2017

PENALTIES

Overhang Forward to MWL	2.458	
Overhang Aft to MWL	3.024	
Subtract from overall length	5.482	
Difference of immersion from salt to fresh water	Meas. Density	0.000
WATERLINE LENGTH (LWL)		13.867
Minimum Displacement for Zero Penalty [m3]	24.984	
Minimum Weight for Zero Penalty [ton] (Water of sg 1.025)	25.609	
WEIGHT [tonne] Actual weight		25.723
Equivalent LWL (for Displ. < min.)	13.889	
Difference	0.022	
DISPLACEMENT PENALTY (add to L)		0.000
Displacement Determination Method		
DRAFT (actual)	2.704	
Max. Draft for Zero Penalty	2.719	
Difference (if positive)		
DRAFT PENALTY (add to Rating)		0.000
BEAM (Min)	3.645	
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	3.720	
Beam at deck	3.720	
Difference (if positive)	0.000	
TUMBLEHOME PENALTY (add to Rating)		0.000

Date and Place of Measurement	03-Jun-22	
Measurer's Name(s)	A Williams	Signature

Design/Age Correction Factor Calculation		
Age Date	1979	
ADCF (Table E-2)	0.9890	
Hull Alteration Scope and Date	1983 Hull change	
Appendage Change Scope and Date	1983 keel	
Change/Alteration Correction ADCF	0.990	
Accommodation Deficiency Ballast		

Yacht's name : Freedom

Date

03-Jun-22

SAIL PLAN

Max Height of Sail Plan =	<input type="text" value="25.000"/>	J=	<input type="text" value="7.350"/>	I =	<input type="text" value="18.750"/>
Boom above Mast Datum =	<input type="text" value="1.550"/>	P=	<input type="text" value="23.450"/>	E=	<input type="text" value="9.710"/>
Rated Mainsail Area	<input type="text" value="113.850"/>	Spi boom=	<input type="text" value="7.350"/>	√S=	<input type="text" value="13.131"/>
J used for Rating			<input type="text" value="7.350"/>		
Rated Foretriangle Area	<input type="text" value="58.570"/>	Propeller allowance			<input type="text" value="1.000"/>
TOTAL RATED SAIL AREA (S)	<input type="text" value="172.420"/>	Corrected sail area			<input type="text" value="172.420"/>

SAIL LIMITS

Mainsail max girth:	1/2 height (68% of E)	<input type="text" value="6.603"/>	3/4 height (41% of E)	<input type="text" value="3.981"/>
Genoa:	max. foot length (J + 4.8m)	<input type="text" value="12.150"/>		
Spinnaker:	1/2 foot max breadth (125% J)	<input type="text" value="9.188"/>	max. luff length=	<input type="text" value="18.611"/>

Spar Measurement

MAST (material)	<input type="text" value="Aluminium"/>	Mast Weight	<input type="text" value="456"/>	CG pos.	<input type="text" value="9.520"/>
Mast dimensions [mm]	Deck <input type="text" value="352 x 246"/>	Half-Height <input type="text" value="350 x 246"/>	Jib-Halyard <input type="text" value="282 x 204"/>	Head <input type="text" value="168 x 126"/>	
Sections area [cm ²]	<input type="text" value="680"/>	<input type="text" value="676"/>	<input type="text" value="452"/>	<input type="text" value="166"/>	
Mast CG Correction (if applicable) Wt & CG	<input type="text" value="54kg"/>	(<input type="text" value="2.540"/>		Mk ²	<input type="text"/>

Engine/Propeller Installation

Engine and propeller weight	<input type="text" value="NA"/>	Propeller diameter =	<input type="text"/>
Minimum boat speed with engine	<input type="text"/>	Propeller position =	<input type="text"/>
Propeller Type (folding feathering fixed pitch etc.), no of blades	<input type="text"/>		<input type="text"/>
Propeller Skew	<input type="text"/>		<input type="text"/>

Flotation

Internal Ballast	Amount	Location aft of bow
10 pcs at 13.5 kg each	135 kg	5.5 m

Measurer's Notes

- 1 Mast has 54kg of corrector weigh at gooseneck
- 2 Mast and J moved aft 2017
- 3 Light Trim Tab
- 4 Flotation change 2019
- 5

Date and Place of Measurement

03-Jun-22

Measurer's Name(s)

A Williams

Signature

