

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

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

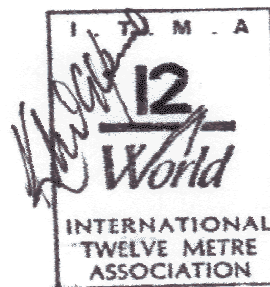
Valid until June 3, 2024

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 
ITMA Technical Director



Stamp of Authority of the
International Twelve Metre Association

RATING CALCULATION

OVERALL LENGTH			19.349
Overhang Forward to FGS	1.904		
Overhang Aft to AGS	2.099		
Total Overhang (Subtract)	4.003		
MEASURED LENGTH (L_{BG})			15.346
Girth at Bow	1.573		
Twice vertical Height at Bow (Subtract)	1.200		
Girth Difference at FGS	0.373		
Add 1.5 x Girth Difference at FGS (min 0.540 m)	0.560		
Girth at Stern	3.323		
Twice vertical Height at Stern (Subtract)	1.634		
Girth Difference at AGS	1.689		
Add 1/3 Girth Difference at AGS (min 0.400 m)	0.563		
Add any penalty (Beam or Displacement)			
Sum of Length and Girth Corrections			16.469
Age/Design Correction Factor (ADCF)(see page 3)	0.9900		
LENGTH (L)			16.304
Skin IM to d1 Port	2.169		
Chain IM to d1 Port	2.157		
d Port	0.012		
Skin IM to d1 Starboard	2.164		
Chain IM to d1 Starboard	2.155		
d Starboard	0.009		
Add d	0.021		
Add GIRTH 2 d			0.042
	Datum Sta.	Actual Sta.	Rating FB
Mean Freeboard Bow		1.186	1.186
Mean Freeboard Midship		0.995	0.988
Mean Freeboard Stern		0.997	0.978
Sum of Freeboards			3.152
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	3-Jun-22	
Measurer's Name(s)	A Williams	Signature <i>Ander</i>

Yacht's name : Freedom		Date	3-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	3-Jun-22
Measurer's Name(s)	A Williams Signature <i>Ander</i>

Design/Age Correction Factor Calculation		
Age Date	1979	
ADCF (Table E-2)	0.9870	
Hull Alteration Scope and Date	1983 Hull change	0.001
Appendage Change Scope and Date	1983 keel	0.001
Change/Alteration Correction ADCF	0.990	
Accommodation Deficiency Ballast		

Yacht's name : **Freedom**

Date

3-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"/>
	Deck	Half-Height	Jib-Halyard	Head	
Mast dimensions [mm]	<input type="text" value="352 x 246"/>	<input type="text" value="350 x 246"/>	<input type="text" value="282 x 204"/>	<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"/>

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

3-Jun-22

Measurer's Name(s)

A Williams**Signature***Ander*