

12



INTERNATIONAL TWELVE METRE CLASS

Yacht's Name NORTHERN LIGHT

National letters and Sail Number US 14 Club _____

Designer Sparkman & Stephens

Builder Henry B. Nevis Inc. Building Year 1938

Owner Hans Eliasson


Owner's Address Dämnet 4, 43492 Lerum, Sweden

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: 23. Jan 23


Measurer K.-E. Brink Signature 


Valid until 22. Jan 25

Supersedes _____

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

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


Signature  ITMA Technical Director

Stamp of Authority of the International Twelve Metre Association 

PROVISIONAL CERTIFICATE REVALIDATION

This yacht has been declared by the Owner to be unchanged from her previous revalidated certificate.

Accordingly this certificate has been revalidated and remains valid until Jan 23, 2025 subject to a successful flotation being carried out by a class measurer prior to racing.

Signature  Jan 23, 2023
K.-E. Brink on behalf of ITMA Technical Director

DRAFT RATING VALUES**OVERALL LENGTH****21.469**

Overhang Forward to FGS

2.595

Overhang Aft to AGS

3.136

Total Overhang (Subtract)

5.731

MEASURED LENGTH (L_{BG})**15.738**

Girth at Bow

1.555

Twice vertical Height at Bow (Subtract)

1.200

Girth Difference at FGS

0.360

Add 1.5 Girth Difference at FGS (min 0.540 m)

0.540

Girth at Stern

3.207

Twice vertical Height at Stern (Subtract)

1.680

Girth Difference at AGS

1.527

Add 1/3 Girth Difference at AGS (min 0.400 m)

0.509

Add any penalty (Beam or Displacement)

0.000

Sum of Length and Girth Corrections

16.787

Age/Date Correction Factor (ADCF)(see page 3)

0.9595

LENGTH (L)**16.107**

Skin IM to d1 Port

2.104

Chain IM to d1 Port

2.083

d Port

0.021

Skin IM to d1 Starboard

2.096

Chain IM to d1 Starboard

2.076

d Starboard

0.020

Add d

0.041

Add GIRTH 2 d**0.082**

Mean Freeboard Bow

Datum Sta.	Actual Sta.	Rating FB
	1.361	1.361
	1.110	1.110
	1.020	1.020
		3.490

Mean Freeboard Midship

1.110

1.110

Mean Freeboard Stern

1.020

1.020

Sum of Freeboards

3.490

Subtract FREEBOARD, F

See Notes

1.163**Add SAIL AREAS (Square root)****13.414****TOTAL OF MEASUREMENTS****28.440**

PENALTY (Draft or Tumblehome)

0.000

RATING**12.000**

Date and Place of Measurement

11. Jun 21 Orust/Sweden

Measurer's Name(s)

K.-E. Brink

Signature

Yacht's name : NORTHERN LIGHT		Date	23. Jan 23
Range Measurement (Yes or No)	N	Date:	11. Jun 21

PENALTIES

Overhang Forward to MWL	3.240	
Overhang Aft to MWL	4.011	
Subtract from overall length	7.251	
Difference of immersion from salt to fresh water	Meas. Density	
WATERLINE LENGTH (LWL)		14.218
Minimum Displacement for Zero Penalty [m3]	26.828	
Minimum Weight for Zero Penalty [ton] (Water of sg 1.025)	27.498	
WEIGHT [tonne] Actual weight		27.505
Equivalent LWL (for Displ. < min.)	14.219	
Difference (if negative)		
DISPLACEMENT PENALTY (add to L)		0.000
Displacement Determination Method	3D-Scan	
DRAFT (actual)	2.770	
Max. Draft for Zero Penalty	2.775	
Difference (if positive)		
DRAFT PENALTY (add to Rating)		0.000
BEAM (Min)	3.600	
Max Beam at 1/3 of Midship Freeboard	3.600	
Difference (if positive)		
BEAM PENALTY (add to L)		0.000
Tumblehome Max. (2 x 2% of Extr. Beam)	0.144	
Extreme Beam	3.600	
Beam at deck	3.514	
Difference	0.086	
TUMBLEHOME PENALTY (add to Rating)		0.000

Date and Place of Measurement	11. Jun 21	Orust/Sweden
Measurer's Name(s)	K.-E. Brink	Signature

Design/Age Correction Factor Calculation		
Age Date	1938	
ADCF (Table E-2)	0.9595	
Hull Alteration Scope and Date		
Appendage Change Scope and Date		
Change/Alteration Correction ADCF		
Accommodation Deficiency Ballast	none	

DRAFT SAIL PLAN

Max Height of Sail Plan =	25.000	J=	6.750	I =	18.750
Boom above Mast Datum =	1.400	P=	23.600	E=	10.691
Rated Mainsail Area	126.150	Spi boom=	6.750	√S=	13.414
J used for Rating	6.750				
Rated Foretriangle Area	53.789	Propeller allowance		1.000	
TOTAL RATED SAIL AREA (S)	179.939	Corrected sail area		179.939	

SAIL LIMITS

Mainsail max girth:	1/2 height (68% of E)	7.270	3/4 height (41% of E)	4.383
Genoa:	max. foot length (J + 4.8m)	11.550		
Spinnaker:	1/2 foot max breadth (125% J)	8.438	max. luff length=	18.442

Spar Measurement

MAST (material)		Mast Weight		CG pos.	
	Deck	Half-Height	Jib-Halyard	Head	
Mast dimensions [mm]					
Sections area [cm ²]					
Mast CG Correction (if applicable) Wt & CG				Mk ²	

Engine/Propeller Installation

Engine and propeller weight		Propeller diameter =	
Minimum boat speed with engine		Propeller position =	
Propeller Type (folding feathering fixed pitch etc.), no of blades			
Propeller Skew			

Flotation

Measurer's Notes

1 Rated freeboard is one third of the sum of the mean freeboards as per 1933 rule

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Measurer's Name(s)	K.-E. Brink