



12

INTERNATIONAL TWELVE METRE CLASS

Yacht's Name	Laura		
National letters and Sail Number	KZ 5	Club	New York Yacht Club
Designer	Farr/Davidson/Holland		
Builder	McMullin and Wing	Building Year	1986
Owner	Frances Curren		
Owner's Address	75 Pennsylvania Ave, Warwick, RI. 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 13-September-2016

Measurer McAlpine/Perrin/Williams Signature *Ander*

Valid until 13-September-2018

Supersedes 04-September-2014

Signature *McAlpine*
ITMA Technical Director



Stamp of Authority of the International Twelve Metre Association

RATING CALCULATION

OVERALL LENGTH				19.131
Overhang Forward to L1		1.758		
Overhang Aft to L1		2.101		
Total Overhang (Subtract)		3.859		
MEASURED LENGTH (L1 L1)				15.272
Girth at Bow		1.557		
Twice vertical Height at Bow (Subtract)		1.200		
O at Bow		0.357		
Add 1 1/2 O at Bow (min 0.540 m)		0.540		
Girth at Stern		3.454		
Twice vertical Height at Stern (Subtract)		1.906		
O at Stern		1.548		
Add 1/3 O at Stern (min 0.400 m)		0.516		
Add any penalty (Beam)		0.000		
Sum of Length and Girth Corrections				16.328
Age Date and Allowance	1986	Allowance	1.0000	
CORRECT LENGTH L				16.328
Skin d to d1 Port		2.172		
Chain d to d1 Port		2.167		
d Port		0.005		
Skin d to d1 Starboard		2.168		
Chain d to d1 Starboard		2.166		
d Starboard		0.002		
Add d		0.007		
Add GIRTH 2 d				0.014
Mean Freeboard Bow O	Actual	1.389	1.389	
Mean Freeboard Midship d	Actual	1.155	1.155	
Mean Freeboard Stern O	Actual	1.133	1.133	
Sum of Freeboards			3.677	
Subtract FREEBOARD, F			See Notes	1.210
Add SAIL AREAS (Square root)				13.308
TOTAL OF MEASUREMENTS				28.440
<i>PENALTY (Draught)</i>			0.000	
RATING				12.000

Date and place of Measurement	13-Sep-16	
Measurer's Name(s)	McAlpine/Perrin/Williams	Signature <i>Ander</i>

PENALTIES

Overhang Forward to L		2.590		
Overhang Aft to L	Includes 50mm fairing strip	2.668		
Subtract from overall length		5.258		
Difference of imersion from salt to fresh water		0.000		
WATERLINE LENGTH				13.873
Minimum Displacement for Zero Penalty [m3]		25.015		
Minimum Weight for Zero Penalty [tonnes] (Water of sg 1.025)		25.640		
	LWL to CL Rudder stock		13.823	
ACTUAL WEIGHT [tonnes]				26.170
Equivalent LWL (for Displ. < min.)		13.973		
Difference		0.100		
DISPLACEMENT PENALTY (add to L)				0.000
DRAUGHT (actual)		2.696		
Max. Draught for Zero Penalty		2.720		
Difference (if positive)				
DRAUGHT PENALTY (add to Rating)				0.000
BEAM (Min)		3.602		
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		3.974		
Beam at deck		3.974		
Difference (if positive)		0.000		
TUMBLEHOME PENALTY (add to Rating)				0.000

Date and place of Measurement

13-Sep-16

Measurer's Name(s)

McAlpine/Perrin/Williams

Signature



SAIL PLAN

Max Height of Sail Plan =	25.000	J=	7.890	I=	18.750
Boom Height =	1.518	A=	23.482	B=	9.640
Rated Mainsail Area	113.183	Spi boom=	8.020	√S=	13.308
Rated Foretriangle Area	63.909	Propeller allowance	1.000		
TOTAL RATED SAIL AREA	177.093	Corrected sail area	177.093		

SAIL LIMITS

Mainsail max girth:	1/2 height (68%)	6.555	3/4 height (41%)	3.952
Genoa:	max. foot length (J + 4.8m)	12.690		
Spinnaker:	1/2 foot max breadth (125% J)	10.025	max. luff length=	18.815

Spar Measurement

MAST (material)	Aluminium	Mast Weight	454	CG pos.	9.502
Mast dimensions [mm]	Deck 352*248	Half-Height 351*247	Jib-Halyard 282*205	Head 169*125	
Sections area [cm ²]	685	681	454	166	

Engine/Propeller Installation

Engine and propeller weight	none	Propeller diameter =	none
Minimum boat speed with engine	none	Propeller position =	none
Engine model and power	none		

Flotation

Internal Ballast	Amount	Location from Bow
44 lead blocks @ 6.33 kg	278.6 kg	10.95m
76 lead blocks @ 6.33 kg	481 kg	11.3m
Lead Pigs	451 kgs	11.5 m
20 x Lead Blocks	372 kgs	9.4 m
31 x Lead Blocks	304.5 kgs	12.7m
3 x batteries @ 20 kgs	60kgs	

Measurer's Notes

- 1 1983 -2001 freeboard rule limit used
- 2 New Keel in 2004
- 3 Hull remeasured 7/6/07 in VLC
- 4 LWL measured to aft end of fairing strip. Fairing Strip extends 50mm beyond CL Rudder Stock
- 5

Date and place of Measurement	13-Sep-16	Signature
Measurer's Name(s)	McAlpine/Perrin/Williams	