

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

now named LISA of Hamburg

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having *Forecastle & R.Q.D.*

Port of Survey *Leith*

Date of Survey *28th June 1932*

Name of Surveyor *Chas R Rowcliffe*

Particulars of Classification **100A1*

Ship's Name *"LISA"* (Type of Superstructures.)

Nationality and Port of Registry *German* Official Number *119083* Gross Tonnage *452* Date of Build *1904-1*

Moulded Dimensions: Length *164.3'* Breadth *26.00* Depth *12.6'*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *926* tons

Coefficient of fineness for use with Tables *.714*

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	12.50	(a) Where D is greater than Table depth (D-Table depth) R = $(12.60-10.95) 1.263$ $1.65 \times 1.263 = +2.08$		Moulded Breadth (B)	26.00
Stringer plate	.03	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50} = 6.24$	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .25 \left(\frac{47.8}{164.3} \right)$.07	If restricted by superstructures		Ship's Round of Beam = 8	
Depth for Freeboard (D) =	12.60			Difference <i>Green</i> 1.76	
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.76}{4} \left(1 - \frac{.2949}{.7051} \right) = -.13$	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	✓					Standard Height of Superstructure 6.00
" overhang	✓					" " R.Q.D. 3.43
R.Q.D. enclosed	94.5'	94.50	4'-0"		94.50	Deduction for complete superstructure 22.43
" overhang	✓		+3' wood			Percentage covered $\frac{S}{L} = 70.91$
Bridge enclosed	✓					" " $\frac{S_1}{L} = 70.51$
" overhang aft	✓					" " $\frac{E}{L} = 70.51$
" overhang forward	20.70	20.70	7'-0"		20.70	Percentage from Table, Line A. —
F'cle enclosed <i>Green</i>	22.30	20.70	+3' wood		20.70	(corrected for absence of forecastle (if required)) —
" overhang	1.30	.65			.65	Percentage from Table, Line B. 63.62
Trunk aft						(corrected for absence of forecastle (if required)) —
" forward						Interpolation for bridge less than .2L (if required) —
Tonnage opening aft						Deduction = $22.43 \times .6362 = 14.27$
" " forward						
Total	116.50	115.85			115.85	

SHEER CORRECTION.

Section	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	26.43	1	✓	26.43	36"	36.00	1	✓	36.00	Mean actual sheer aft = <i>Green</i>
1/4 L from A.P.	11.76	4	✓	47.04	16.5"	16.59	4	✓	66.36	Mean actual sheer forward = <i>Green</i>
1/2 L	2.91	2	✓	5.82	4"	4.15	2	✓	8.30	Mean standard sheer aft = <i>Green</i>
Amidships	—	4	✓	—	0	—	4	✓	—	Mean standard sheer forward = <i>Green</i>
3/4 L from F.P.	5.81	2	✓	11.62	7"	7.31	2	✓	14.62	Length of enclosed superstructure forward of amidships = .075
1/4 L	23.52	4	✓	94.08	29"	29.23	4	✓	116.92	" " aft of " = .50
F.P.	52.86	1	✓	52.86	66"	66.00	1	✓	66.00	
Total				237.85					335.06	
Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{237.85 - 335.06}{18} = -5.40$										
If limited on account of midship superstructure. $\frac{175}{200} = .875$										

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

RAISED QUARTER
Depth to Freeboard Deck = 16.78
Summer freeboard = 4.50
Moulded draught (d) = 12.28

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.07 - 3
Addition for Winter North Atlantic Freeboard (if required) = 2

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$
Tons per inch immersion at summer load water line

$T = 8 \text{ tons}$
Deduction = $\frac{\Delta}{40 T}$ inches

3" =

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient	$\frac{.714 + .68}{1.36} = 1.394$				
Depth Correction	2.08				
Deduction for superstructures	14.27				
Sheer correction	1.87				
Round of Beam correction	.13				
Correction for Thickness of Deck amidships	2.16				
Other corrections, scantlings, etc.	48.00				
Summer Freeboard	53.91				

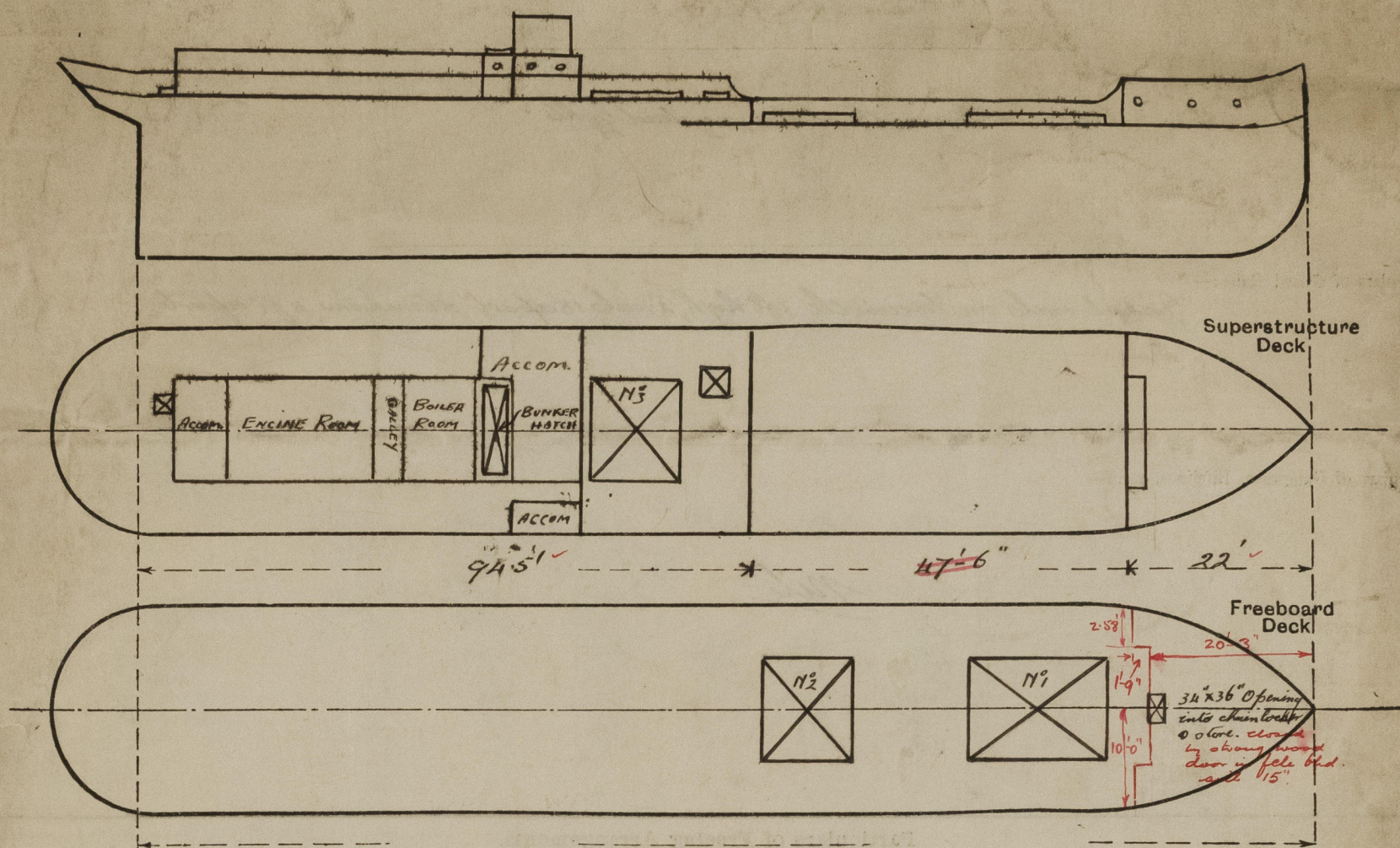
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	6"	Tropical Fresh Water Freeboard	4'-0"
Fresh Water Line	3"	Fresh Water	4'-3"
Tropical Line	3"	Tropical	4'-3"
Winter Line below	3"	Winter	4'-9"
Winter North Atlantic Line	5"	Winter North Atlantic	4'-11"

2 JUL 1932

MARKING FORM
RECEIVED - 5 MAR 1934
MARKING FORM
RECEIVED 26 JUL 1932

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



3" pitch pine sheathing
on freeboard & raised
quarter decks.

Side - enclosed
Sideboard 2.58x1.15
Squire 10
Nahang 1.3
22.00

State any special features in the construction of the ship:—

This vessel is in dry dock for condition survey.

Builder's name and yard number *Napier & Miller Ltd Glasgow. N°132.*

Names of sister ships

Owners *Coast Lines Ltd.*

Fee £ *5* : *2* : *0*

Received by me



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