

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Pop. raised quarter deck, bridge, forecastle. Port of Survey Copenhagen

(Type of Superstructures.)

Ship's Name "CIMBRIA" Nationality and Port of Registry DANISH Official Number 2652.96 Gross Tonnage 2652.96 Date of Build 1921-8

Ex. S.N.A.G COPENHAGEN O.Y.L.W. Name of Surveyor J. S. Andersen

Moulded Dimensions: Length 300 Breadth 45.75 Depth 20.3 4954

Moulded displacement at moulded draught = 85 per cent. of moulded depth not available tons

Coefficient of fineness for use with Tables .734

Date of Survey 4.7.35

Particulars of Classification +100. A.I.

Depth for Freeboard (D) Moulded depth 20.25

Stringer plate 04

Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) = 20.29

Depth correction (a) Where D is greater than Table depth (D-Table depth) R = (20.29 - 20.00) 2.308 = + 0.64

(b) Where D is less than Table depth (if allowed) (Table depth-D) R =

If restricted by superstructures

Round of Beam correction Moulded Breadth (B) 45.75

Standard Round of Beam = $\frac{B \times 12}{50} = 10.98$

Ship's Round of Beam 11.50

Difference .52

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.52}{4} \times .3333 = -.04$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Pop enclosed ...	18.67	18.64	7.00		18.64
" overhang ...	4.2				
R.Q.D. enclosed ...	106.00	106.00	5.00		106.00
" overhang ...					
Bridge enclosed ...	52.00	52.00	7.00		52.00
" overhang aft ...	<u>26</u>				
" overhang forward ...					
F'cle enclosed ...	23.33	23.33	7.00		23.33
" overhang ...					
Trunk aft ...			2.00		
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	200.00	200.00			200.00

Standard Height of Superstructure	6.50
" " R.Q.D.	4.664
Deduction for complete superstructure	35.33
Percentage covered $\frac{S}{L} =$	66.64
" " $\frac{S_1}{L} =$	66.64
" " $\frac{E}{L} =$	66.64
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	54.34
Interpolation for bridge less than 2L (if required)	
Deduction =	35.33 x .5434 = 20.26

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	40.00	1	40.00	51	36.00	40.94	40.94
$\frac{1}{8}$ L from A.P. ...	14.80	4	41.20	18	15.80	18.23	42.92
$\frac{2}{8}$ L " ...	4.40	2	8.80	4	3.95	4.51	9.02
Amidships ...		4		0			
$\frac{3}{8}$ L from F.P. ...	8.80	2	14.60	9	9.08	9.08	18.16
$\frac{1}{8}$ L " ...	35.60	4	142.40	36	36.34	36.34	145.36
F.P. ...	80.00	1	80.00	81	84.00	84.00	84.00
Total ...			360.00				340.43

Mean actual sheer aft =	Excess	4.00
Mean standard sheer aft =		4.664
Mean actual sheer forward =	Excess	3.33
Mean standard sheer forward =		4.00
Length of enclosed superstructure forward of amidships =	$\frac{26.64}{300} = .0889$	
" " aft of " =	.504	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{10.43}{18} \times (.75 - .3333) = -.24$

If limited on account of midship superstructure, $-.24 \times \frac{189}{20} = -.23$ If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

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

Depth to Freeboard Deck =	20.29
Summer freeboard =	2.11
Moulded draught (d) =	18.18

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.54

Addition for Winter North Atlantic Freeboard (if required) = 2.00 = 50 fms.

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 5282$

Tons per inch immersion at summer load water line

$T = 24$

Deduction = $\frac{\Delta}{40 T}$ inches = 4.89

= 124 fms.

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient	7.36	43.40
Depth Correction	.64	45.13
Deduction for superstructures	20.26	
Sheer correction	.23	
Round of Beam correction	.04	
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
Summer Freeboard =	25.24	

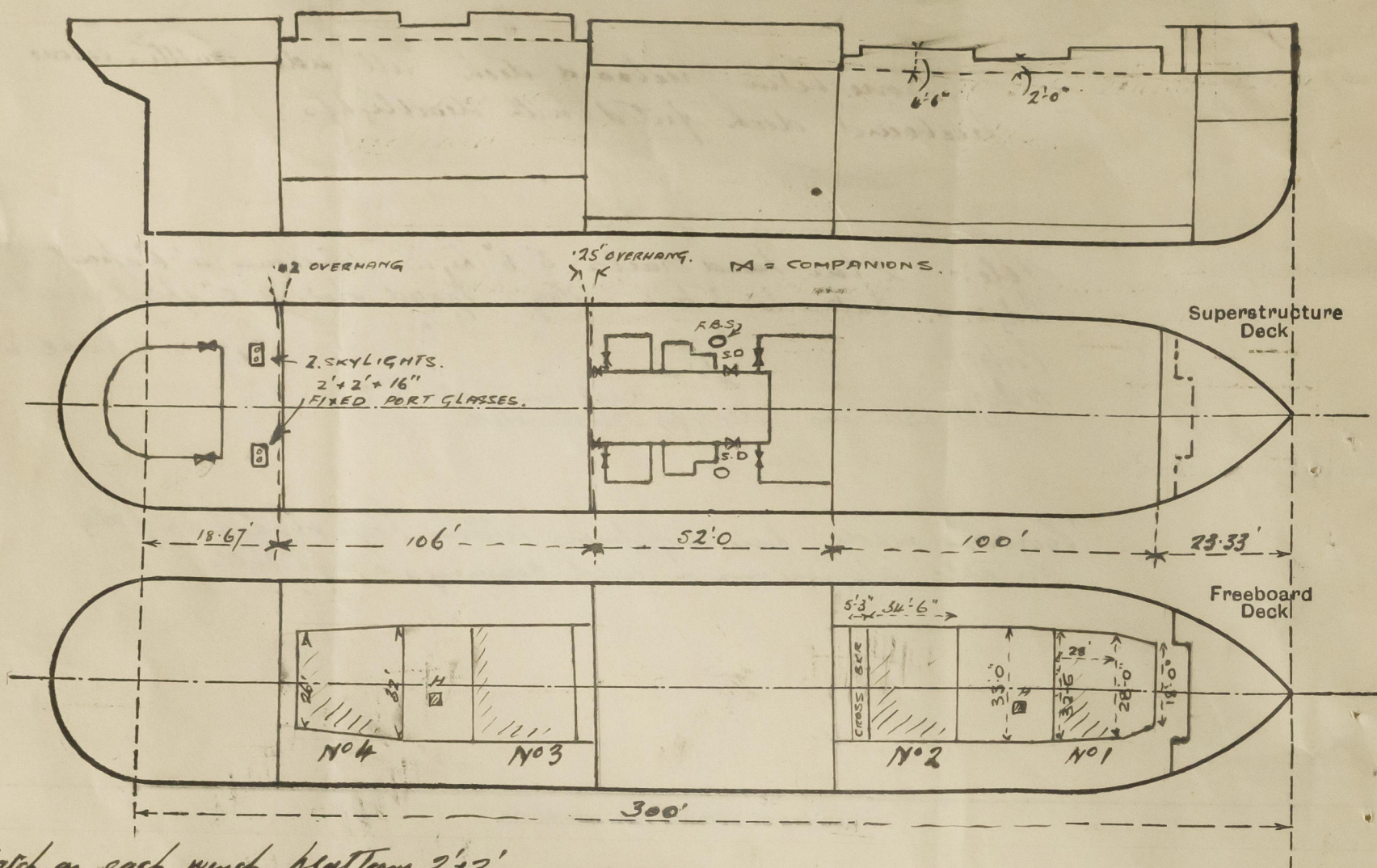
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Existing freeboards as reassigned being more favorable than those computed under the Convention

Tropical Fresh Water Line above Centre of Disc	200	Tropical Fresh Water Freeboard	530
Fresh Water Line	124	Fresh Water	578
Tropical Line	46	Tropical	730
Winter Line below	46	Winter	806
Winter North Atlantic Line	152	Winter North Atlantic	

Lloyd's Register
Foundation

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 shown on the following sketches:—



H = Hatch on each winch platform 2' x 2',
12" Coaming 40 inch, Steel hinged
w. 2 covers with screw top

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

Timber freeboards desired:—

The following items are in hand for compliance with the timber freeboard requirements:—
Centre girder, watertight from Collision Bld to after end of Mach. Space Bld.
Midship half of Centre Girder here, made watertight, watertight.
Eye plates for lashings 10'0" apart + 6'6" from end bds
Sockets to take uprights
(permanently attached to stringer plate)

The vessel is provided with a steam steering gear in the deckhouse on the poop deck and hand gear is also provided, the transmission from the bridge is by telemeter gear.
The vessel has been examined in drydock.

The owners desire the Convention freeboards if these are less than the 1906 standard as at present assigned.

Builder's name and yard number

Names of sister ships

Owners

A/S. Met. Forenade Kulimporer

Fee £

Received by me



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Foundation