



ISSUED BY THE BOARD OF TRADE.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having prop and combined Bridge + Forecastle
computation per 1906 Rules
(Type of Superstructures.)

Port of Survey London

Date of Survey 27-10-32

Name of Surveyor G. A. Green
Green

Particulars of Classification 100 A1 Lloyd's
with Freeboard

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
STRATHAIRD	British London	162670	22543.87	1931.

Moulded Dimensions: Length 630.0 Breadth 80.0 Depth 37.6
Moulded displacement of moulded draught 5 per cent. of moulded depth.....tons

MINISTRY OF TRANSPORT
RECEIVED
26 FEB 1945
MAINE DIVISION
Depth for 20 JAN 1945
Stringer plate

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

Depth for Freeboard (D) =

Depth correction.
(a) Where D is greater than Table depth
(D - Table depth) R =
(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)
Standard Round of Beam, $= \frac{B \times 12}{50} =$
Ship's Round of Beam =
Difference
Restricted to
Correction $= \frac{Diff}{4} \times \left(1 - \frac{S_1}{L} \right) =$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...					

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

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...		1					1		
$\frac{1}{2}$ L from A.P. ...		4					4		
$\frac{1}{4}$ L " " ...		2					2		
Amidships ...		4					4		
$\frac{3}{4}$ L from F.P. ...		2					2		
$\frac{1}{2}$ L " " ...		4					4		
F.P. ...		1					1		
Total ...									

Mean actual sheer aft
Mean standard sheer aft =
Mean actual sheer forward
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships =
" " aft of " =

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

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard. Ft. Depth to Freeboard Deck = Summer freeboard = Moulded draught (d) = Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = Addition for Winter North Atlantic Freeboard (if required) =	Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line T = Deduction = $\frac{\Delta}{40 T}$ inches =	Correction for coefficient Depth Correction ... Deduction for superstructures ... Sheer correction ... Round of Beam correction ... Correction for Thickness of Deck amidships ... Other corrections, scantlings, etc. ... Summer Freeboard =

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

Tropical Fresh Water Line above Centre of Disc ...	Tropical Fresh Water Freeboard ...
Fresh Water Line " " " " ...	Fresh Water " " " " ...
Tropical Line " " " " ...	Tropical " " " " ...
Winter Line below " " " " ...	Winter " " " " ...
Winter North Atlantic Line " " " " ...	Winter North Atlantic " " " " ...

Strathaird O.N. 162670

2

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

		HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS					
		1	2	3	4	5	6
Description of Hatchway		on fore beam	on fore beam	on fore beam	on fore beam	on fore beam	on fore beam
Dimensions of Hatchway		13.6 x 16.0	19.6 x 16.0	19.8 x 16.0	12.9 x 16.0	13.9 x 16.0	13.9 x 16.0
COAMINGS	Height above Deck	30"	30"	30"	30"	30"	30"
	Thickness	.34	.34	.34	.34	.34	.34
	Sides	.34	.34	.34	.34	.34	.34
	Ends	.34	.34	.34	.34	.34	.34
HATCH BEAMS	Stiffeners	7.3 x 16.0	7.3 x 16.0	7.3 x 16.0	7.3 x 16.0	7.3 x 16.0	7.3 x 16.0
	Brackets, Stays	7.3 x 16.0	7.3 x 16.0	7.3 x 16.0	7.3 x 16.0	7.3 x 16.0	7.3 x 16.0
	Number	one	one	one	one	one	one
	Spacing	6.0	6.0	6.0	6.0	6.0	6.0
FORE AND AFTERS	Unsupp'd Lengths	3.0	3.0	3.0	3.0	3.0	3.0
	Scantling* and Sketch	See above	See above	See above	See above	See above	See above
	Bearing Surface	3	3	3	3	3	3
	Material	Steel	Steel	Steel	Steel	Steel	Steel
HATCH COVERS	Thickness	.34	.34	.34	.34	.34	.34
	How Fitted	See above	See above	See above	See above	See above	See above
	Bearing Surface	3	3	3	3	3	3
	Material	Steel	Steel	Steel	Steel	Steel	Steel
Spacing of Cleats		6	6	6	6	6	6
Number of Tarpaulins		5	5	5	5	5	5

Particulars of fiddle, funnel and ventilator coamings:— *no exposed fiddle openings except on Boat deck.*

Particulars of Flush Bunker Scuttles:—

none

Particulars of Companionways:—

✓

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

on foreboard deck:— aft under protection of shade (Pole bridge + prop) and protected by bulwarks all vents provided with wood plugs and canvas covers.
4.0 high 8 at 16 1/2" dia. Coamings 2.6 high x 7/20 thick.
on upper foreboard deck:— can't vents about 12" dia. Coamings 3.0 x 7/20
and 12 x 16 1/2" canvas covers - with 2.0 coamings 7/20 thick
on poop deck:— aft 12-4 1/2" canvas covers - 2.0 coamings 7/20 thick
In all cases the deck fastenings are considered satisfactory.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

one 3 1/2" air pipe - 2.6 high on foreboard deck - aft all C.B.B. air pipes led through ship's side with hoods - (except oil tanks where air pipes are led up funnel) all as approved for P.C.

Particulars of Gangway Cargo and Coaling Ports:—

no coaling ports.

Gangway doors in each side of bridge 65' 5" secured w.t. and all one but filling door in upper 'ween decks (as approved for P.C.)

Strathaird O.N. 162670

3

Particulars of Scuppers and Sanitary Discharge pipes:—

all as approved for P.C.

Particulars of Side Scuttles:—

all as approved for P.C.

Particulars of Guard Rails:—

Hand rails on deck houses
12" rails 3-9 all others as required for passenger decks.

Particulars of Gangways, Lifelines, etc.:—

Crews access below weather decks

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each Side	Area each Side	Rule area each side
After Well	81.5	4.0	2.0' x 1.5'	3	9	16.3
Forward Well	4.0	4.0	2.75' x 1.33	4	14.64	

State position of each freeing port ... After Well:— 14.3, 41.6 + 68.5 from Bridge and 1/2 aft edge - sills 9"
 (F. and A. position and height above deck edge) Forward Well:—
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— *covers fitted + two bars each*
 Additional area where sheer is less than standard.

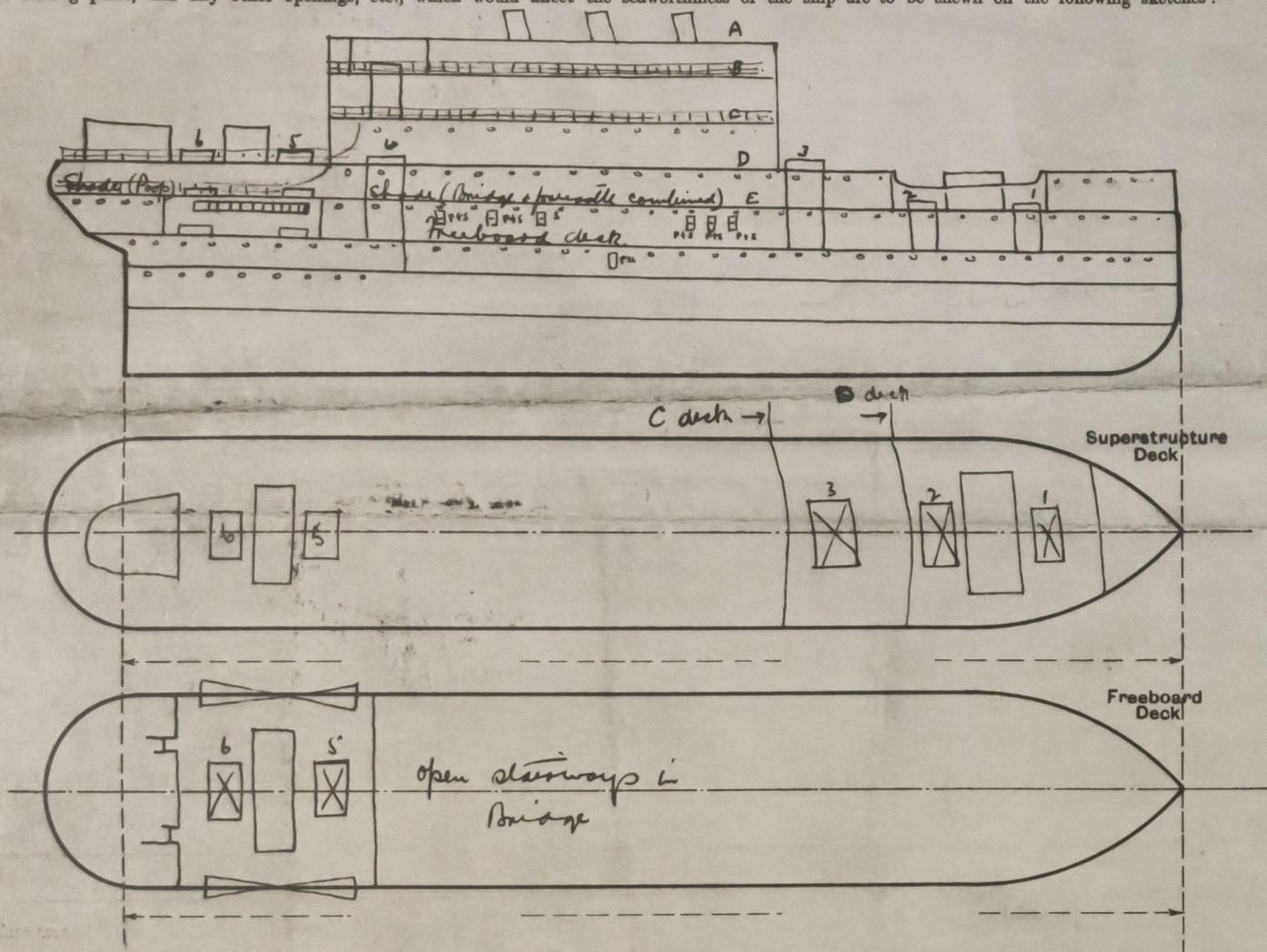
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	.30	.30	3/8" angles	30"	none	2.0' x 1.5'	15"	15"
Raised Quarter Deck Bulkhead	.30	.30	3/8" angles	30"	none	2.0' x 1.5'	15"	15"
Bridge, After Bulkhead	.30	.30	3/8" angles	30"	none	2.0' x 1.5'	15"	15"
Bridge, Forward Bulkhead	.30	.30	3/8" angles	30"	none	2.0' x 1.5'	15"	15"
Forecastle Bulkhead	.30	.30	3/8" angles	30"	none	2.0' x 1.5'	15"	15"
Trunk, Aft	.30	.30	3/8" angles	30"	none	2.0' x 1.5'	15"	15"
Trunk, Forward	.30	.30	3/8" angles	30"	none	2.0' x 1.5'	15"	15"
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	none	none	none	none	none	none	none	none
Exposed Machinery Casings on Superstructure Decks	none	none	none	none	none	none	none	none
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	✓	✓	✓	✓	✓	✓	✓
Deckhouses on Flush Deck Ships	✓	✓	✓	✓	✓	✓	✓	✓

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	2" stiles 1 1/2" panels manipulated both sides
Raised Quarter Deck Bulkhead	2" stiles 1 1/2" panels manipulated both sides
Bridge, After Bulkhead	2" stiles 1 1/2" panels manipulated both sides
Bridge, Forward Bulkhead	2" stiles 1 1/2" panels manipulated both sides
Forecastle Bulkhead	2" stiles 1 1/2" panels manipulated both sides
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	2" stiles 1 1/2" panels manipulated both sides
Exposed Machinery Casings on Superstructure Decks	2" stiles 1 1/2" panels manipulated both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	2" stiles 1 1/2" panels manipulated both sides
Deckhouses on Flush Deck Ships	2" stiles 1 1/2" panels manipulated both sides

Strathaird O.N. 162670

4

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:—



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

This is a new vessel built to the Board's requirements for a passenger steamship - The Bulkheads at the ends of sections and the hatchways to the freeboard aft are protected by a complete deck over them and the bulwarks are 4-0 high with rectangular slots in the side plate between the top of bulwark and the shade deck.

1/1946. Survey - Particulars as previously reported and in good condition 16/1/46 J. Robinson.

2/1945. Survey - Particulars as previously reported. 10. Wacker. 3/45. J. 24/2/45.

3/1944 Survey. Particulars already reported hereon unchanged 3/44 J. Green.

2/1943 Survey - see report - all as previously reported hereon. details 3/43 J. Green 30/4/43 J. M.

Builder's name and yard number... Nicks Armstrong 664

Names of sister ships... Strathnaver

Owners... P. & O. S. Nav. Co. Ltd.

Annual Survey - 21/10/33 - Satisfactory 1/11/33 J. Lewis
Annual S. L. Survey carried out concurrently with survey for P.C. on the 27.9.34
Particulars unchanged and fittings in good order J. A. Green. 2.10.34

July - October 1935 Survey
all items remain as reported hereon and are in satisfactory condition J. Lewis 29/10/35

June 1936
Annual Loadline Survey All items as hereon in Satisfactory Condition J. Lewis 1/7/36

March 1941. Loadline survey. No alterations affecting computation. Conditions of assignment satisfactorily maintained 10 J. Lewis 15/3/41

Feb. 1942. Particulars as previously reported hereon 9/2/42 J. Lewis

Lloyds Register Foundation