

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name STRATHAIRD.	Official Number 162670.	Nationality and Port of Registry Griekish London.	Gross Tonnage 22568 <i>22568</i> <i>22568</i>	Date of Build 1932-1.	Port of Survey NEWCASTLE-ON-TYNE
Moulded Dimensions: Length 631.75' Breadth 80.0' Depth 37.5' (to F. deck)					Date of Survey 28. 11. 47
Moulded displacement at moulded draught = 85 per cent. of moulded depth 30610 tons					Surveyor's Signature G. Campbell.
Coefficient of fineness for use with Tables 68 (actual 66.7)					Particulars of Classification *100A1 with freeboard (for max. draught 29'-0" mld.)

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	37.50	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	80.00
Stringer plate (.44")	.04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	19.20
Sheathing on exposed deck				Ship's Round of Beam	6.00
$T \left(\frac{L-S}{L} \right) = \frac{2.5 \times 81.5}{12 \times 631.75}$.03	$(42.12 - 37.57) \times 3$	-13.65	Difference	13.20
Depth for Freeboard (D)	37.57	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L}\right)$	+ 0.45"

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
P.T.O. { Poop enclosed (VIRTUAL)	42.18	42.18	7.97 to 8.03	-	42.18	Standard Height of Superstructure 7.5'
" " " overhang ("")	3.47	1.74	8.03	-	1.74	" " " R.Q.D. -
R.Q.D. enclosed						Deduction for complete superstructure 42"
" " " overhang						Percentage covered $\frac{S}{L} = 87.10$
FCLE { Bridge enclosed	493.25	493.25	9.07 to 8.0 MIN.	-	493.25	" " $\frac{S_1}{L} =$
" " " overhang aft	11.35	8.51	8.5	-	8.51	" " $\frac{E}{L} =$
" " " overhang forward						Percentage from Table, Line A. 83.21
F'cle enclosed						(corrected for absence of forecastle (if required))
" " " overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" " " forward						Interpolation for bridge less than .2L (if required)
Tonnage opening aft						Deduction = 42 x 83.21
" " " forward						- 34.95"
Total	550.25	545.68			545.68	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	73.17	1		73.17	84.75	84.75	1		84.75
$\frac{1}{2}$ L from A.P.	32.56	4		130.24	39.62	39.62	4		158.48
$\frac{2}{3}$ L	8.05	2		16.10	7.62	7.62	2		15.24
Amidships	0	4		-	0	0	4		-
$\frac{2}{3}$ L from F.P.	16.10	2		32.20	20.38	20.38	2		40.76
$\frac{1}{2}$ L	65.13	4		260.52	77.25	77.25	4		309.00
F.P.	146.35	1		146.35	156.00	156.00	1		156.00
Total				658.58					764.23

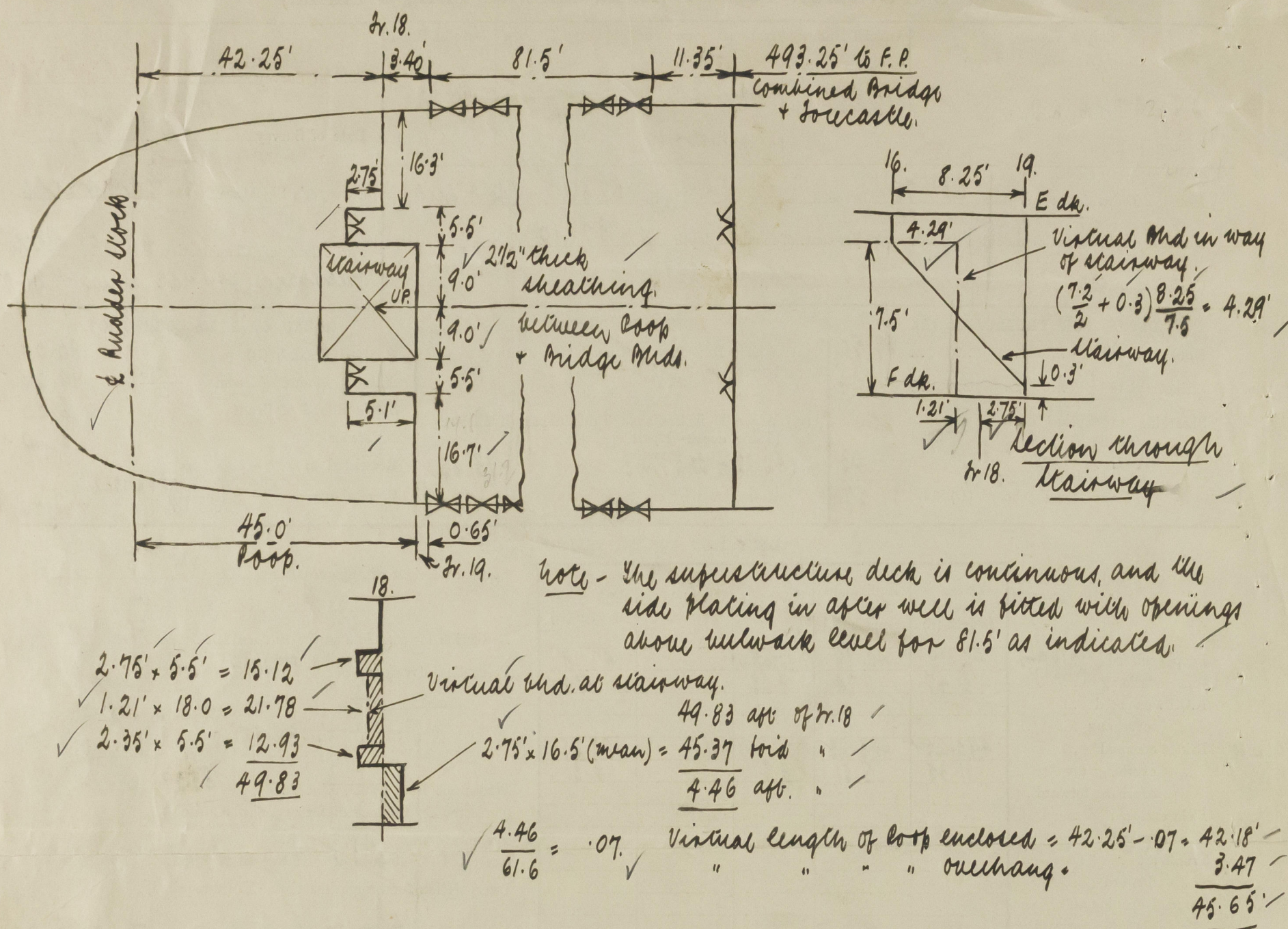
Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - \frac{S}{2L}}{.75} \right) = \frac{105.65}{18} \left(\frac{.75 - \frac{4355}{764.23}}{.75} \right) = -1.85"$
 If limited on account of midship superstructure. **20.** If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. **20.**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 37.54 Summer freeboard = 8.54 Moulded draught (d) = 29.00 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7 1/4" Addition for Winter North Atlantic Freeboard (if required) = -	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ 27560 Tons per inch immersion at summer load water line $T =$ 95.5 Deduction = $\frac{\Delta}{40 T}$ inches = 7.21" (= 7 1/4")	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient Nil. Depth Correction ... 13.65 Deduction for superstructures ... 34.95 Sheer correction ... 1.85 Round of Beam correction ... 0.36 Correction for Thickness of Deck amidships ... 15.66 Other corrections, scantlings, etc. ... 16.11 Summer Freeboard = 102.50
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Freeboard as previously assigned by the P.O.T. now reassigned after amendment for new position of deck line	Tropical Fresh Water Line above Centre of Disc	7 1/4"	Tropical Fresh Water Freeboard	8'-6 1/2"
	Fresh Water Line	7 1/4"	Fresh Water	7'-11 1/4"
	Tropical Line	N/L	Tropical	8'-6 1/2"
	Winter Line below	7"	Winter	9'-1 1/2"
	Winter North Atlantic Line		Winter North Atlantic	

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.



Trade of ship Foreign-going Passenger & Cargo.

Names of sister ships "Scraper"

Builder's name and yard number Vickers-Armstrongs Ltd. Barrow. No 664.

Owners P. & O. Lim. Hav. Co.

Fee £