

B.T. COPY

30 JUN 1932

29584

Rpt. C.11.

Index. No. 29584
(For London Office only.)Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

No. 100651.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>LIVERPOOL</u>
having <u>COMBINED "FORECASTLE & BRIDGE":</u> <u>28' POOP</u>					Date of Survey <u>27th June 1932 and</u> <u>Subsequently</u>
(Type of Superstructures.)					Name of Surveyor <u>J. Y. Ellalcolu Sen.</u>
Ship's Name <u>"SAMARIA"</u>	Nationality and Port of Registry <u>BRITISH</u> <u>LIVERPOOL</u>	Official Number <u>145923</u>	Gross Tonnage <u>19597</u>	Date of Build <u>1921</u> <u>8:10</u>	Particulars of Classification <u>2nd 100-A-1: Shelter</u> <u>deck with freeboard.</u>
Moulded Dimensions: Length <u>600.3</u> Breadth <u>73.5</u> Depth <u>45'0"</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>35640</u> tons					
Coefficient of fineness for use with Tables <u>.739</u>					

Depth for Freeboard (D)		Depth correction	Round of Beam correction
Moulded depth	<u>45'0"</u>	(a) Where D is greater than Table depth (D-Table depth) R = <u>(45.08 - 40.02) / 3 = 15.18</u>	Moulded Breadth (B) <u>73.5</u>
Stringer plate	<u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>17.64</u>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .25 \times .1416$	<u>.04</u>	"	Ship's Round of Beam = <u>4"</u>
Depth for Freeboard (D) =	<u>45.08</u>	If restricted by superstructures	Difference <u>deficient 13.64</u>
			Restricted to
			Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{13.64}{4} \times .1416 = 6.148$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	<u>24.3</u>	<u>24.30</u>	<u>8'0"</u>	-	<u>24.30</u>	Standard Height of Superstructure <u>7.5</u>
" overhang						" " R.Q.D. <u>-</u>
R.Q.D. enclosed						Deduction for complete superstructure <u>42.2</u>
" overhang						Percentage covered $\frac{S}{L} =$ <u>85.84</u>
Bridge enclosed						" " $\frac{S_1}{L} =$ <u>85.84</u>
" overhang aft						" " $\frac{E}{L} =$ <u>85.84</u>
" overhang forward	<u>491.0</u>	<u>491.00</u>	<u>8'6"</u>	-	<u>491.00</u>	Percentage from Table, Line A. <u>82.54</u>
F'cle enclosed						(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B. <u>-</u>
Trunk aft						(corrected for absence of forecastle (if required))
forward						Interpolation for bridge less than 2L (if required) <u>-</u>
Tonnage opening aft						Deduction = <u>.8254 x 42 = 34.64</u>
" forward						
Total	<u>515.30</u>	<u>515.30</u>			<u>515.30</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<u>70.03</u>	1		<u>70.03</u>	<u>72</u>	<u>72.00</u>	1		<u>70.03</u>	Mean actual sheer aft = <u>excess</u>
$\frac{1}{2}$ L from A.P.	<u>31.16</u>	4		<u>124.64</u>	<u>31</u>	<u>31.90</u>	4		<u>124.64</u>	Mean actual sheer forward = <u>deficient</u>
$\frac{2}{3}$ L "	<u>7.70</u>	2		<u>15.40</u>	<u>8</u>	<u>7.98</u>	2		<u>15.40</u>	Mean standard sheer forward
Amidships	-	4		-	<u>0</u>	-	4		-	Length of enclosed superstructure forward of amidships =
$\frac{2}{3}$ L from F.P.	<u>15.40</u>	2		<u>30.80</u>	<u>15 1/2</u>	<u>15.35</u>	2		<u>30.70</u>	" " aft of <u>7</u>
$\frac{1}{2}$ L "	<u>62.32</u>	4		<u>249.28</u>	<u>61</u>	<u>61.43</u>	4		<u>245.68</u>	
F.P.	<u>140.06</u>	1		<u>140.06</u>	<u>138</u>	<u>138.00</u>	1		<u>138.00</u>	
Total				<u>630.21</u>					<u>624.45</u>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{5.76}{18} \left(.75 - \frac{515.30}{2 \times 600.3} \right) = +.10$

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.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 45.21
Summer freeboard = 12.79
Moulded draught (d) = 32.42

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 8.10 8"

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 29405$

Tons per inch immersion at summer load water line

$T = 85.84$

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

$= 8.65$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.739 + .68}{1.36} = \frac{1.419}{1.36}$

	+	-
Depth Correction	<u>15.18</u>	
Deduction for superstructures		<u>34.64</u>
Sheer correction	<u>10</u>	
Round of Beam correction	<u>4.8</u>	
Correction for Thickness of Deck amidships	<u>1.52</u>	
Other corrections, scantlings,	<u>35.70</u>	
	<u>52.98</u>	<u>34.64</u>

Summer Freeboard = 153.50SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, 2" LITONIL ON Steel, Deck:—Tropical Fresh Water Line above Centre of Disc ... 16 3/4"
Fresh Water Line " " ... 8 3/4"
Tropical Line " " ... 8"
Winter Line below " " ... 8"Tropical Fresh Water Freeboard ... 11' - 4 3/4"
Fresh Water " " ... 12' - 0 3/4"
Tropical " " ... 12' - 1 1/2"
Winter " " ... 13' - 5 1/2"

1 JUL 1932

MARKING FORM

1-1 APR 1932

MARKING FORM

19 NOV 1932

MARKING FORM

16 NOV 1932

MARKING FORM

12 JUL 1932

RECEIVED

RECEIVED

RECEIVED

RECEIVED

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS												
← - - - - C: DECK - - - - X - - - - B: DECK - - - - D: DECK - - - - →												
Description of Hatchway			Nº1.	Nº2.	Nº3.	Nº4.	Nº5.	Nº6.	Nº7.	Nº2A:		
Dimensions of Hatchway			15'8" x 14'0"	16'6" x 14'0"	13'3" x 14'0"	21'2" x 14'0"	12'10" x 14'0"	13'0" x 14'0"	13'0" x 14'0"	16'6" x 14'0"		
COAMINGS	{	Height above Deck	30"	30		As. Nº1:				15"		
		Thickness	Sides	.44								
			Ends	.44								
		Stiffeners										
		Brackets, Stays	7x3 x .50			As. Nº1:				NONE.		
HATCH BEAMS	{	Number	3	3	3	4	2	2	2	3		
		Spacing	3'10"	4'1"	3'3"	3'4"	4'3"	4'3"	4'7"	4'0"		
		Scantling and Sketch					As. Nº1:					
		Bearing Surface	3 1/2"				As. Nº1:					
FORE AND AFTERS	{	Number										
		Spacing										
		Unsupported Lengths										
		Scantling* and Sketch										
		Bearing Surface	NONE.									
HATCH COVERS	{	Material	W.W.									
		Thickness	3"				As:	Nº1.				
		How fitted	F.V.A.									
		Bearing Surface	3"									
Spacing of Cleats			24"				As:	Nº1.				
Number of Tarpaulins			3	3	3	3	2	2	2			

*Are wood fore and afters steel shod at all bearing surfaces? NONE.

Are battens and wedges efficient and in good condition? YES.

Are tarpaulins in good condition and in accordance with rule requirements? YES.

Are lashings provided in accordance with rule requirements? YES.

Particulars of fiddle, funnel and ventilator coamings:— Fiddle funnel and ventilator coamings are strongly constructed and in efficient condition.
 Engine Room skylight is of steel and is " " " "
 Boiler casing: 4'-0" above Boat deck.
 Engine. " 8'-0" " " "

Particulars of Flush Bunker Scuttles:—

"NONE"

C: DECK; MT. ISLAND HOUSE FWD: SIDES: 2@5'-6"x30" SILL. 10" MECHANS. W.T. DOORS EFFICIENTLY CONSTRUCTED. OPERATED FROM BOTH SIDES.
 " " " " FWD: END. 2@5'-7"x30" " 6 1/2" STRONG WOOD: DES " " " " "
 " " " " FWD: TO CREWS: QUARTERS 1@5'-1"x30" " 9" " " DR. " " " "
 " " " " 2ND. ISLAND HOUSE FWD: SIDES: 2@5'-6"x43" " 11" MECHANS. W.T. DOORS: " " " "

Particulars of Companionways :—

"C"	" " " " "-ENDS:	4@5'7"x60"	"B" STRONG WOOD DOORS:	"	"
"E"	" BRIDGE FRONT:	2@5'9"x36"	"12" MECHANS. N.T. DOORS:	"	"
"C"	" " ENDS:	2@5'7"x48"	"7 1/2" STRONG WOOD DOORS:	"	"
"C"	" ISLAND HOUSE AFT.-END	2@6'-2"x60"	"15" STEEL DOORS:	"	"
"C"	" " " "-SIDES:	2@8'-6"x64"	"10" Wood. "(SLIDING.)	"	"
"D"	" TUNNEL: ESCAPE DOORS:-	2@5'-0"x24"	"15" STEEL DOORS:	"	"

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

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

	1 @ 23" DIAM. X 8'-0" HIGH X 1/2" THICK. LED. TO STORES.		1 @ 18" DIAM. X 2'-7" OAM. X 40" THICK. TO TUNNEL. (CONV.)
C. DLK	2 @ 24" " X 4'-10" " X 40" " " " NO. 1. HOLD.	C. DLK	2 @ 10" " X 3'-3" " X 3/16" " " STORES. (M.V)
FWD.	1 @ 18" " X 4'-10" " X 40" " " " STORES.	AFT.	1 @ 24" " X 2'-7" " X 40. " " NO. 7. HOLD (CONV)
MIDSHR	1 @ 22" " X 4'-10" " X 40. " " " NO. 3. THERMAT.		2 @ 8" " X 6'-0" " X 3/16" " " BAGGAGE RM. II
WT. TOP TYPE	2 @ 24" " X 4'-10" " X 40 " " " NO. 2 HOLD.		1 @ 29 1/2" TELUP. X 10 1/2 X 6" LED. TO BAGGAGE RM: P
	2 @ 24" " X 4'-10" " X 40. " " " NO. 3. HOLD.		

Canvas covers and wood plugs are on board for all masts.
All masts on Boat deck are in good condition and comply with rule requirements.

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

1 Steel Air Pipe on C Deck forward: 10" to lip and 4" diameter. Led to Fore Peak Tank. ✓
1 " " " " C " AFT: 8 1/2" COAMING. " 4" " " " AFT. " " (in)
5 " " " " D " " 29" to lip " 4" " " " Double Bottom Tanks.

Remainder of air pipes come through shell between "C & D" Decks. and are fitted with N.R. Valves. —
Wood plugs are on board for air pipes as required. —

Particulars of Gangway Cargo and Coaling Ports :—

FORWARD: 18:15: 8'0" X 6'0" DOUBLE SHELL DOORS: (IN HALVES.) EFFICIENTLY CONSTRUCTED AND FITTED WITH STRONG BACKS.

M103418: 14:15: 8'-0" x 6'-0" " " " " " " " " " " " "

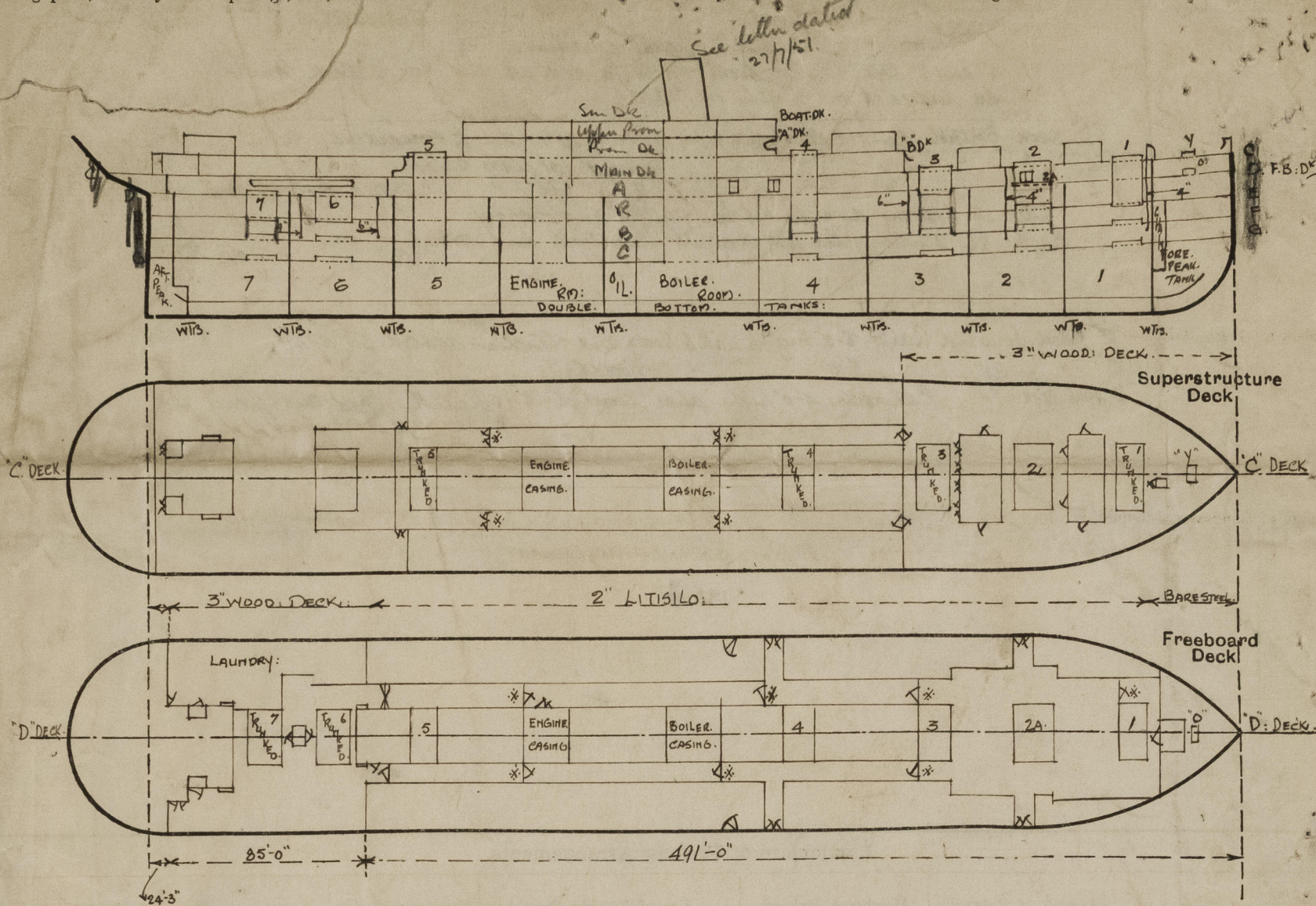
11 PORT: 6'-0" x 4'-0" SINGLE OIL. " " " " " " " " " "

" 15' x 6' 0" x 5' 0" " " " " " " " " " " " "

5 PORT. 5. STARB: GALLEY. COAL. SHUTES. 2'-6" x 3'-0" " " WITH STRONG HINGED QUADRANTS. AND.

AN EFFICIENT WATERTIGHT CLOSING ARRANGEMENT.

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:— SMALL HATCHES.

FILE NO. Y ACCESS: HATCH: 3'-9\" x 3'-11\" COAMING: 23\" FITTED: WITH A STEEL HINGED FLAP STRONGLY CONSTRUCTED AND WATERTIGHT WITH BUTTERFLY NUTS FASTENING ARRANGEMENT
 UNDER FILE O " " 3'-11\" x 3'-11\" " 11\" " " WOOD COVERS: REST BARS: 2 1/2\"

• FIRE PROOF DOORS.

NOTE: All doors in port working alleyway on "D" Deck are strongly constructed and are capable of being operated from both sides. Sills vary in height from: 5" to 12" above 2 1/2" deck covering.
 All stairways on "D" Deck alleyway are protected by a strong steel deck house.

"VESSEL AFLOAT: SURVEY FOR LOAD LINE ASSIGNMENT ONLY."

Builder's name and yard number. CANNELL: LAIRD & CO LTD: BIRKENHEAD: YARD: 11th 836:
 Names of sister ships SCYTHIA: & LACONIA: (THESE HAVE BEEN MEASURED & ASSIGNED.)
 Owners CUNARD: S.S. CO. LTD.

Fee £ 17 : - : - Received by me [Signature]