

N^o. 3515.

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No.

25381

(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having **POOP-BRIDGE AND FORECASTLE**

Port of Survey **PIRAEUS.**

Date of Survey **20th Sept. 1933**

Name of Surveyor **Wm. Rennie**

Particulars of Classification **+100R1**

Ship's Name	Nationality and Registry	Port of Registry	Official Number	Gross Tonnage	Date of Build
S.S. ALIKI.	GREEK.	PIRAEUS.	✓	5140	1917-11
Moulded Dimensions: Length 399.7' Breadth 52.0' Depth 31.0'					
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12090 tons					
Coefficient of fineness for use with Tables .773					

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	31.0	(a) Where D is greater than Table depth (D-Table depth) R = (31.04 - 26.65) 3.00		Moulded Breadth (B)	52.00
Stringer plate	.64	= + 13.17"		Standard Round of Beam = $\frac{B \times 12}{50}$	12.48"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	✓	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	✓	Ship's Round of Beam	13"
Depth for Freeboard (D) =	31.04	If restricted by superstructures	✓	Difference	.52"
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$= \frac{.52}{4} \times 4956 = -.06$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
op enclosed ...	49.25	49.25	8'-2"	✓	49.25
overhang ...					
Q.D. enclosed ...					
overhang ...					
idge enclosed...	112.66	112.66	8'-0"		112.66
overhang aft ...					
overhang forward					
le enclosed ...	38.70	38.70	8'-0"		38.70
overhang ...	1.00	1.00			1.00
unk aft ...					
forward ...					
nnage opening aft ...					
forward					
Total ...	201.61	201.61			201.61

Standard Height of Superstructure	7.497
" " R.Q.D.	✓
Deduction for complete superstructure	41.98
Percentage covered $\frac{S}{L} =$	50.44%
" " $\frac{S_1}{L} =$	50.44%
" " $\frac{E}{L} =$	50.44%
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	36.44%
Interpolation for bridge less than 2L (if required)	
Deduction = 41.98 x .3644	= - 15.30"

SHEER CORRECTION.

Position	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	49.97	1		49.97	60.00	60.00	1		60.00
A.P. ...	22.24	4		88.96	26.07	26.07	4		104.28
" ...	5.50	2		11.00	6.50	6.50	2		13.00
ips ...	✓	4		✓	0.0	✓	4		✓
F.P. ...	11.00	2		22.00	13.03	13.03	2		26.06
" ...	44.48	4		177.92	52.14	52.14	4		208.56
F.P. ...	99.94	1		99.94	120.00	120.00	1		120.00
Total ...				449.79					531.90

Mean actual sheer aft =	$E \times \text{class}$
Mean standard sheer aft	
Mean actual sheer forward =	$E \times \text{class}$
Mean standard sheer forward	
Length of enclosed superstructure forward of amidships =	.155 L
" " aft of " =	.127 L

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{82.11}{18} (.75 - .2522) = - 2.27"$

If limited on account of midship superstructure. ✓

If limited to maximum allowance of 1½ ins. per 100 ft. ✓

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

Depth to Freeboard Deck =	Ft. 31.04
Summer freeboard =	5.98
Moulded draught (d) =	25.06

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{25.06}{4} = 6.265 = 6\frac{1}{4}" = 159\frac{1}{4}"$

Addition for Winter North Atlantic Freeboard (if required) = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line	$\Delta = 11535$
Tons per inch immersion at summer load water line	T = 41.62
Deduction = $\frac{\Delta}{40T}$ inches	= $\frac{11535}{40 \times 41.62} = 6.93 = 7"$

TABULAR FREEBOARD corrected for Flush Deck (if required)
Correction for coefficient

	+	-
Depth Correction	13.17	-
Deduction for superstructures	-	15.30
Sheer correction	-	2.27
Round of Beam correction	-	.06
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	13.17	17.63

Summer Freeboard = 71.83

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

Tropical Fresh Water Line above Centre of Disc	13.4" = 337
Fresh Water Line	7" = 178
Tropical Line	6.4" = 159
Winter Line below	6.4" = 159
Winter North Atlantic Line	✓

Tropical Fresh Water Freeboard	5'-11 $\frac{3}{4}" = 1822\frac{3}{4}"$
Fresh Water	4'-10 $\frac{1}{2}" = 1485"$
Tropical	5'-4 $\frac{3}{4}" = 1644"$
Winter	5'-5 $\frac{1}{2}" = 1663"$
Winter North Atlantic	6'-6" = 1981"

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MARKING FORM

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

		FREEBOARD DECK				SUPERIOR	
		HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS					
Description of Hatchway		Nº 1	Nº 2	Nº 3	Nº 4	BUNKER HATCH	BUNKER HATCH
Dimensions of Hatchway		32'-5 1/2" x 26'-0"	34'-7 1/2" x 26'-0"	34'-7 1/2" x 26'-0"	30'-3 1/2" x 26'-0"	10'-10" x 18'-6"	10'-10" x 18'-0"
COAMINGS	Height above Deck	30"				9' x 3 1/2" x 18"	18"
	Thickness Sides	4 1/4"				1 3/4"	4 1/4"
	Stiffeners Ends	4 1/4"				✓	✓
	Stiffeners Ends	10" x 3 x 55 BA				✓	✓
HATCH BEAMS	Brackets, Stays	2 AT 2" DIA.					
	Number	6	6	6	5		
	Spacing	4'-7 1/2"	4'-10 3/4"	4'-10 1/4"	5'-0 1/2"		
	Scantling and Sketch	PL-2 1/4" x 38" STL-LS-6" x 3 1/2" x 46"				NONE	
Bearing Surface		3 1/2"					
FORE AND AFTERS	Number					3	3
	Spacing					4'-6"	10'-3"
	Unsupported Lengths						
	Scantling* and Sketch	NONE				PL-10" x 30" STL-LS-3 x 3 x 40"	
Bearing Surface						3 1/2"	3 1/2"
HATCH COVERS	Material		W.P.			W.P.	
	Thickness		2 1/2" - 3"			2 1/2"	
	How fitted		F & R			THWARTS	
	Bearing Surface		3"			3 1/2"	
Spacing of Cleats			24" MAX				
Number of Tarpaulins		2	2	2	2	1	2

*Are wood fore and afters steel shod at all bearing surfaces? **Yes**

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 fiddley, funnel and ventilator coamings:—

Particulars of siddle, funnel and ventilator coverings:—
 Stokehold gratings covered by strong steel hinged covers.
 Siddle, funnel & ventilators in efficient condition.
 Engine skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

ON POOP DECK—1 Steel Companion P & S. side, 4'-0" x 2'-6" x 5'-0" high, leading to enclosed poop, door of hardwood operated from both sides. Bill 12".

ON BRIDGE DECK—1 Steel Companion, Port Side, 4'-0" x 3'-6" x 3'-6" high, leading to accommodation on foreboard deck. Double hinged doors and sliding top of hardwood, secured from both sides. Bill 12".

all investigations

[illegible]

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

Freeboard Deck in Wells	10 GN. pipes, 22" high x 2 1/2 - 3" diam.	from double bottom tanks
FORECASTLE DECK	1 " " 24 " " x 3 " " " "	fore peak
	1 " " 18 " " x 3 " " " "	double bottom tanks
BRIDGE DECK	6 " " 23 " " x 3 " " " "	aft Peak
POOP DECK	2 " " 12 " " x 2 1/2 " " " "	

Efficient means of closing provided

Particulars of Gangway Cargo and Coaling Ports:—
1 watertight door, P₄ S, in bridge sides, 1'-6" x 1'-6", sill 12" above freeboard deck,
efficiently constructed and permanently secured. ✓


Particulars of Scuppers and Sanitary Discharge Pipes —
8" x 10" below freeboard

Particulars of Scuppers and Sanitary Discharge Pipes —
 Soil pipes below foreboard deck, are fitted with gunmetal storm valve
 at ship side.
 2 scuppers, P & S side, from bridge tween deck space, sill approx 14" below
 foreboard deck, fitted with wood plug at ship side and
 inner end.

Particulars of Side Scuttles: No scuttles below freeboard deck!
Side scuttles to crew spaces in poop, and stores in fore-castle are
of substantial construction and fitted with hinged
headlights.!

Particulars of Guard Rails:—
Steel bulwarks on freeboard decks in wells, of substantial construction and efficiently supported.
Guard rails on fore-castle & bridge decks, 3' 0" high, having 2 rods and stanchions spaced 3' 6" apart. On poop deck, 3' 2" high, stanchions spaced 4' 6" apart, 2 wires.

Particulars of Gangways, Lifelines, etc. :-
Provision made for rigging lifelines. P & S. side across the
well decks.

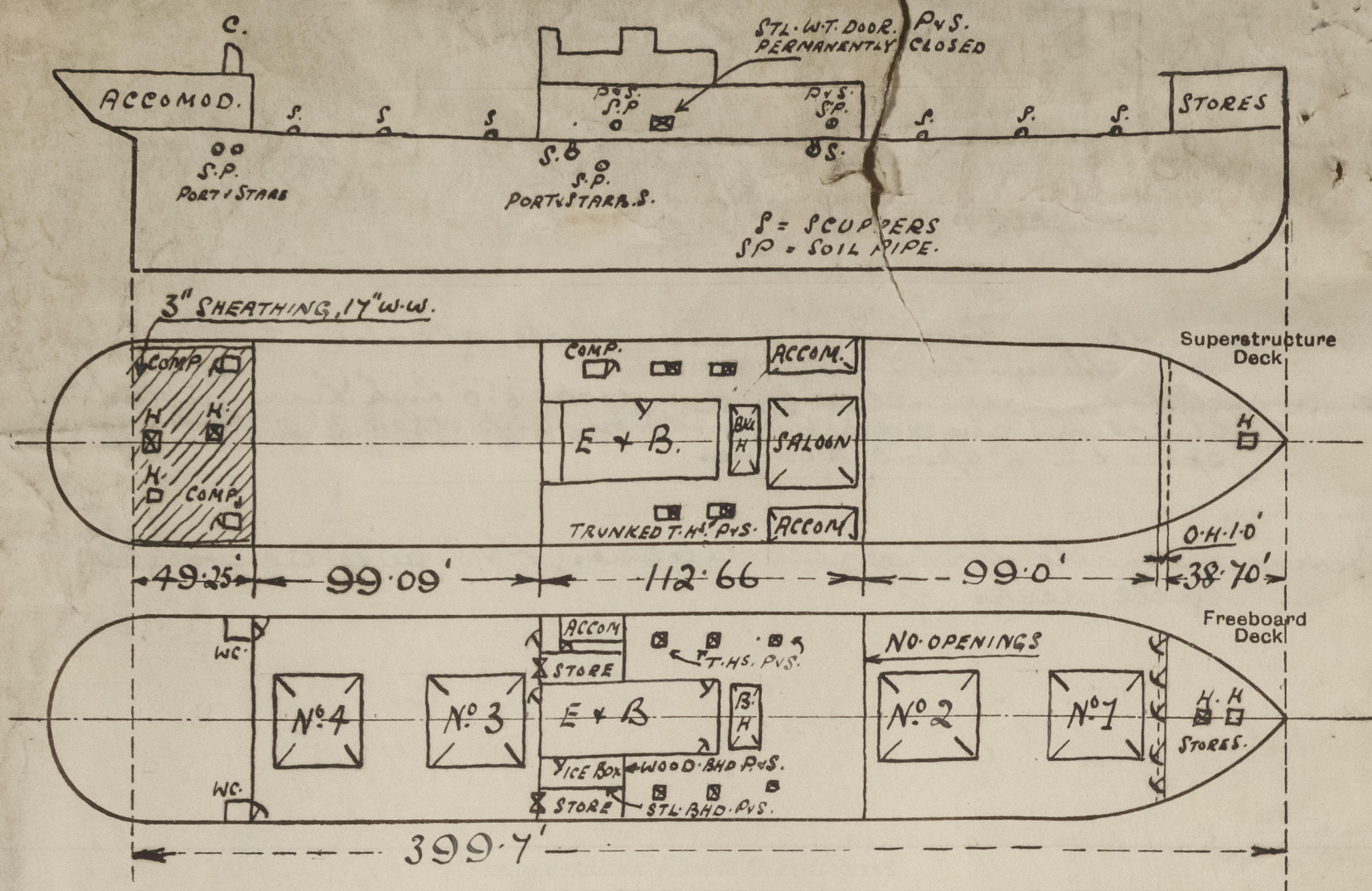
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	99.09'	3'-8"	4'-8" X 	3	21 ϕ	19.82 ϕ
Forward Well	99.0'	3'-6.	1'-6" Dile 13"	3	21 ϕ	19.80 ϕ
<p>State position of each freeing port ... } After Well: <i>From Ridge g/c bulwark - 14'-0", 5'-0", 4'-0", 3'-0"</i> (P. and A. position and height above deck edge) } Forward Well: <i>" " " " 9'-4", 3'-6", 4'-0", 3'-0"</i> State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: <i>fitted with 2 bars.</i></p>						
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	46	40	6x3 1/2 x 32	2'-1"	none	2-5'0" x 2'-0"	18"	✓
Raised Quarter Deck Bulkhead						1-5'0" x 2'-0"	15"	
Bridge, After Bulkhead	✓	38	6x3 1/2 x 34	2'-2 1/2"	none	2-4'0" x 7'-10"	NO COAMING (T.O.)	
Bridge, Forward Bulkhead	✓	42	9x3 1/2 x 40	2'-5"	BKTS. TOP AND BOTTOM	1-4'-2" x 2'-4"	27"	
Forecastle Bulkhead	24	24	4x3 x 32	2'-9" MAX.	NONE	2-4'5" x 2'-4"	24"	✓
Trunk, Aft						2-3'9" x 2'-0"	16"	
Trunk, Forward						1-3'4" x 6'-2"	9"	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	38	4x3 x 38	4'-4"	BKTS AT TOP	1-5'0" x 2'-0"	16"	4'-0"
Exposed Machinery Casings on Superstructure Decks	✓	38	4x3 x 38	4'-4"	FIDLEY	2-5'6" x 2'-0"	15"	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	38	4x3 x 38	4'-4"	NONE	1-3'0" x 1-3'6" x 3'-0"	28"	
Deckhouses on Flush Deck Ships	✓							

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	1- P.V.S. to W.C.S. hinged steel doors, operative from both sides.
Raised Quarter Deck Bulkhead	1- Port side, to store, hinged hardwood door of substantial construction, operated from both sides.
Bridge, After Bulkhead	1- Port side to E.R. hinged steel door, operative from both sides.
Bridge, Forward Bulkhead	1- P.V.S. to W.C.S. hinged steel door, operative from both sides.
Forecastle Bulkhead	5 hinged hardwood doors of subst. const. operative from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	1- Port side to E.R. hinged steel door, operative from both sides.
Exposed Machinery Casings on Superstructure Decks	1- P.V.S. to W.C.S. hinged steel door, operative from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	1- Starboard side, hinged insulated wood door, operated from E.R. casing.
Deckhouses on Flush Deck Ships	

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo 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:— Particulars of Small Hatches.

FREEBOARD DECK.

FCL. SPACE. 1-3'-0" x 3'-0" } - coaming 10" x 3 x 50 BA, keel 2", covers 3", 8 cleats, 1 tarp.
1-2'-0" x 2'-0" }
BOD. TWIN. DR. TH. PVS. 2-5' x 1'-10" " 9" x 3 x 48 BA, " 1 3/4, " 2 1/2, 8 " , 1 " "
" 2 PVS. 4'-3" x 4'-0" " 12" x 22. " 3" " 2 1/2, 8 " , 1 " "

SUPERSTR. DECK

FCL. DECK - 1-2'-10" x 2'-10" , " 17" x 34 , " 2" , " 2 1/2, 8 " , 2 "
BOD. DR. - Trunked T.H. 2 PVS - 8'-7" x 4'-2" , " 18" x 34 , " 3" , " 2 1/2, SP. 18" , 2 "
POOP DR. FORD - 3'-6" x 3'-6" " 18" x 36 , hinged steel cover, 6 butterfly nuts.
AFT - 2'-8" x 2'-10" " 18" x 32 , keel 2 1/4, covers 2 1/2, 8 cleats, 2 tarp.
STARS - 2'-6" x 2'-6" " 9" x 3 1/2 x 50 BA, " 2" , " 2 1/2, 8 " , 2 " "
SADDLE HATCH. 17'-5" x 4'-5" , " 12" x 40. , " 2 1/2, " 3" , 30" sp" , 1 " "
2 steel skylights on Poop deck, 5'-0" x 4'-2", of substantial construction.

Taken from Displacement Scale.

DRAFT.	DISPLACEMENT.
25'-2 1/4 (L.D)	11,480
24'-9"	11,240.
24'-3"	10,980.

Vessel measured afloat and in dry dock.

Builder's name and yard number Cammell Laird & Co.

Names of sister ships ✓

Owners N.G. LIVANOS.

Fee £ 32 : 0 : 0
EXP. 6 : 0 : 0

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