

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

10 JAN 1933

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having closed Shelter Deck

(Type of Superstructures.)

Port of Survey Newcastle-on-Tyne

Date of Survey 9th Jan 1933

Name of Surveyor J. H. Lowther

Particulars of Classification +100A1
Shelter DK with fld.
S.S. Nwc. No 3-12-30.

Ship's Name SUNLAND Nationality and Port of Registry British London Official Number 142374 Gross Tonnage 4882 Date of Build 1918-4

Moulded Dimensions: Length 364.21 Breadth 51.16 Depth 32.0 to shelter dk.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 8824 11402 tons
Coefficient of fineness for use with Tables 808

Depth for Freeboard (D) 32.0

Moulded depth ... 32.0

plate ... 0.4

sed deck

for Freeboard (D) = 32.04

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = $(32.04 - 24.28) 2.801 = + 21.74$

(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) 51.16

Standard Round of Beam = $\frac{B \times 12}{50} = 12.28$

Ship's Round of Beam = 12 1/2

Difference 22 max

Restricted to

Correction = $\frac{\text{Diff}^2}{4} \times (1 - \frac{S_1}{L}) = \frac{22^2}{4} \times (1 - \frac{S_1}{L}) = 481 = .05(-)$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	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 = <u>NIL</u>

SHEER CORRECTION.

Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft	Mean standard sheer aft
46.42	1		46.42	45	45.00	1		45.00		
20.65	4		82.60	20	20.54	4		82.16		
5.11	2		10.22	5	5.12	2		10.24		
	4		-	-	-	4		-		
10.21	2		20.42	10	10.04	2		20.08		
41.31	4		165.24	40	40.28	4		161.12		
92.84	1		92.84	90	90.00	1		90.00		
			414.44					408.60		
									Mean actual sheer aft = <u>defiant</u>	Mean standard sheer aft = <u>defiant</u>
									Mean actual sheer forward = <u>defiant</u>	Mean standard sheer forward = <u>defiant</u>
									Length of enclosed superstructure forward of amidships = <u>ho Butte</u>	
									" " aft of " = <u>ho Butte</u>	

Difference between sums of products $\frac{18}{18} \left(\frac{75 - S}{2L} \right) = \frac{9.14}{18} \times 75 = + .38$

on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

for Tropical Freeboard.
or Winter and Winter North Freeboard.

h to Freeboard Deck = 32.04
mer freeboard = 8.62
Moulded draught (d) = 23.42

Tropical freeboard and addition for
eeboard = $\frac{d}{4}$ inches = 5.86 = 5 3/4
Winter North Atlantic Freeboard (if

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 10047$

Tons per inch immersion at summer load water line

$T = 37.7$

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

$= \frac{10047}{40 \times 37.7} = 6.66$

$= 6 \frac{3}{4}$

TABULAR FREEBOARD (60.66 + 5.46) corrected for Flush Deck (if required)

Correction for coefficient

$\frac{808 + 68}{136} = \frac{1.488}{1.36}$

$+ \frac{1.36}{1.36} = 1.01$

$60.66 + 5.46 + 1.01 = 67.13$

$67.13 - 6.66 = 60.47$

$60.47 - 0.05 = 60.42$

$60.42 - 0.05 = 60.37$

$60.37 - 0.05 = 60.32$

$60.32 - 0.05 = 60.27$

$60.27 - 0.05 = 60.22$

$60.22 - 0.05 = 60.17$

$60.17 - 0.05 = 60.12$

$60.12 - 0.05 = 60.07$

$60.07 - 0.05 = 60.02$

$60.02 - 0.05 = 59.97$

$59.97 - 0.05 = 59.92$

$59.92 - 0.05 = 59.87$

$59.87 - 0.05 = 59.82$

$59.82 - 0.05 = 59.77$

$59.77 - 0.05 = 59.72$

$59.72 - 0.05 = 59.67$

$59.67 - 0.05 = 59.62$

$59.62 - 0.05 = 59.57$

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

Tropical Fresh Water Line above Centre of Disc	... 12 1/2
Fresh Water Line	" " ... 12 1/2
Tropical Line	" " ... 12 1/2
Winter Line below	" " ... 12 1/2
Winter North Atlantic Line	" " ... 12 1/2

Tropical Fresh Water Freeboard	... 8 1/2
Fresh Water	" " ... 8 1/2
Tropical	" " ... 8 1/2
Winter	" " ... 8 1/2
Winter North Atlantic	" " ... 8 1/2

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway	No 1 FORWARD	No 2	No 2A	No 3	No 4	Poop Hatch	Fidley Coal Hatch	FP Store	BUNKER HATCHES	SALOON STORE HATCH	
Dimensions of Hatchway	25' x 18'	24'2" x 18'0"	12'6" x 18'0"	24'2" x 18'0"	25' x 18'		4'0" x 15'0"	3'9" x 2'6"	10'0" x 3'6"	1'9" x 2'6"	
COAMINGS											
Height above Deck	32"	32"	32"	32"	32"	D	14"	15"	32"	FLUSH	
Thickness	4 1/4"	4 1/4"	4 1/4"	4 1/4"	4 1/4"	3	2 1/2"	3 1/4"	4 1/4"	3 1/4"	
Sides	4 1/4"	4 1/4"	4 1/4"	4 1/4"	4 1/4"	3	2 1/2"	3 1/4"	4 1/4"	3 1/4"	
Stiffeners	9 x 3 1/2 BA	9 x 3 1/2 BA	9 x 3 1/2 BA	9 x 3 1/2 BA	9 x 3 1/2 BA	3	2 1/2"	3 1/4"	4 1/4"	3 1/4"	
Brackets, Stays	2 STAYS	2	2	2	2	3	2 1/2"	3 1/4"	4 1/4"	3 1/4"	
HATCH BEAMS											
Number	4	5	2	5	4	WITH					
Spacing	5'-0"	4'-10"	4'-2"	4'-10"	5'-0"	ATT					
Scantling and Sketch	Plat 16" x 10" x 3/4" Angle 4 x 3 x 4 1/2	Plat 16" x 10" x 3/4" Angle 4 x 3 x 4 1/2	Plat 16" x 10" x 3/4" Angle 4 x 3 x 4 1/2	Plat 16" x 10" x 3/4" Angle 4 x 3 x 4 1/2	Plat 16" x 10" x 3/4" Angle 4 x 3 x 4 1/2	CLOSING					
Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	OF					
FORE AND AFTERS											
Number						T.O					
Spacing						HOUSE					
Unsupported Lengths						ENTRANCE					
Scantling and Sketch						BUILT					
Bearing Surface						OVER					
HATCH COVERS						LEADING					
Material	WP	WP	WP	WP	WP	TO	WP	WP	WP	WP	
Thickness	3"	3"	3"	3"	3"	CREWS	2 1/4"	2 1/2"	3"	2 1/4"	
How fitted	F+A	F+A	F+A	F+A	F+A	SPACE	F+A	T	T	F+A	
Bearing Surface	3'4" x 8"	3'4" x 8"	3'4" x 8"	3'4" x 8"	3'4" x 8"		2 1/4"	2 1/2"	3"	2 1/4"	
Spacing of Cleats	22" x 25"	22" x 25"	22" x 25"	22" x 25"	22" x 25"		27" x 30"	16" x 26"	19" x 24"	NONE	
Number of Tarpaulins	2	2	2	2	2		2	2	2	NONE	

*Are wood fore and afters steel shod at all bearing surfaces?
 Are battens and wedges efficient and in good condition?
 Are tarpaulins in good condition and in accordance with rule requirements?
 Are lashings provided in accordance with rule requirements?

Yes
 Yes
 Yes

Particulars of fiddle, funnel and ventilator coamings:-

Stokehold gratings covered by strong steel hinged covers
 Fiddle funnel + ventilator in efficient condition
 The engine room skylight of steel strongly constructed

Particulars of Flush Bunker Scuttles:-

None

Particulars of Companionways:-

On freeboard deck to tween decks forward Steel 5'-0" x 3'-6" x 6'-0" ht opening at after end. 1 1/2" teak door solid ordinary hinged type 4'-2" x 2'-6" 18" sill Door lock requires repair
 To crew quarters in tween decks aft Strong steel house 10'-0" x 10'-0" B x 7'-0" ht Openings 1 ft 5 5'-0" x 2'-3" x 16" Sill Doors are of teak + can be operated both sides

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

To fore peak 3 off 9" diam 14" coaming
 To holds 9 off 18" " 30" 21" diameter vents
 To tween deck aft 6 off 6" diam 15" coaming
 To tween deck 5" diam 6" vents to bunker tween decks
 WOOD PLUGS + CANVAS COVERS A NUMBER MISSING
 Vents are well constructed + to rule requirements

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

One to fore peak 5" diam 10" ht
 Eleven to oil tanks 3" " 12 1/2" " 3" " 14" " 2" " 15" " 3" " 7" " 19" "
 Canvas covers as
 No means of closing air pipes

Particulars of Gangway Cargo and Coaling Ports:-

None

SUNLAND

Particulars of Scuppers and Sanitary Discharge Pipes:-

Sanitary pipes from midship house and accommodation aft and wc's forward + aft are fitted with malleable cast iron valve at ship's side
 Scupper holes are through shelter deck stringer bar

Particulars of Side Scuttles:-

Sidelights to crew quarters aft and in forward store are fitted with strong steel hinged deadlights

Particulars of Guard Rails:-

Steel bulwark at fore end to fore end No 1 hatch and from fore end of officers deck house to after end of engineers house 3'-3" high elsewhere rails 3'-3" high having 3 rods + stanchions 4'-3" apart

Particulars of Gangways, Lifelines, etc.:-

No lifelines fitted

Quitable provision made for rigging lifelines available for use in the regular working of the ship

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		✓				
Forward Well		✓				

State position of each freeing port (F. and A. position and height above deck edge)
 After Well:-
 Forward Well:-
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:-
 Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

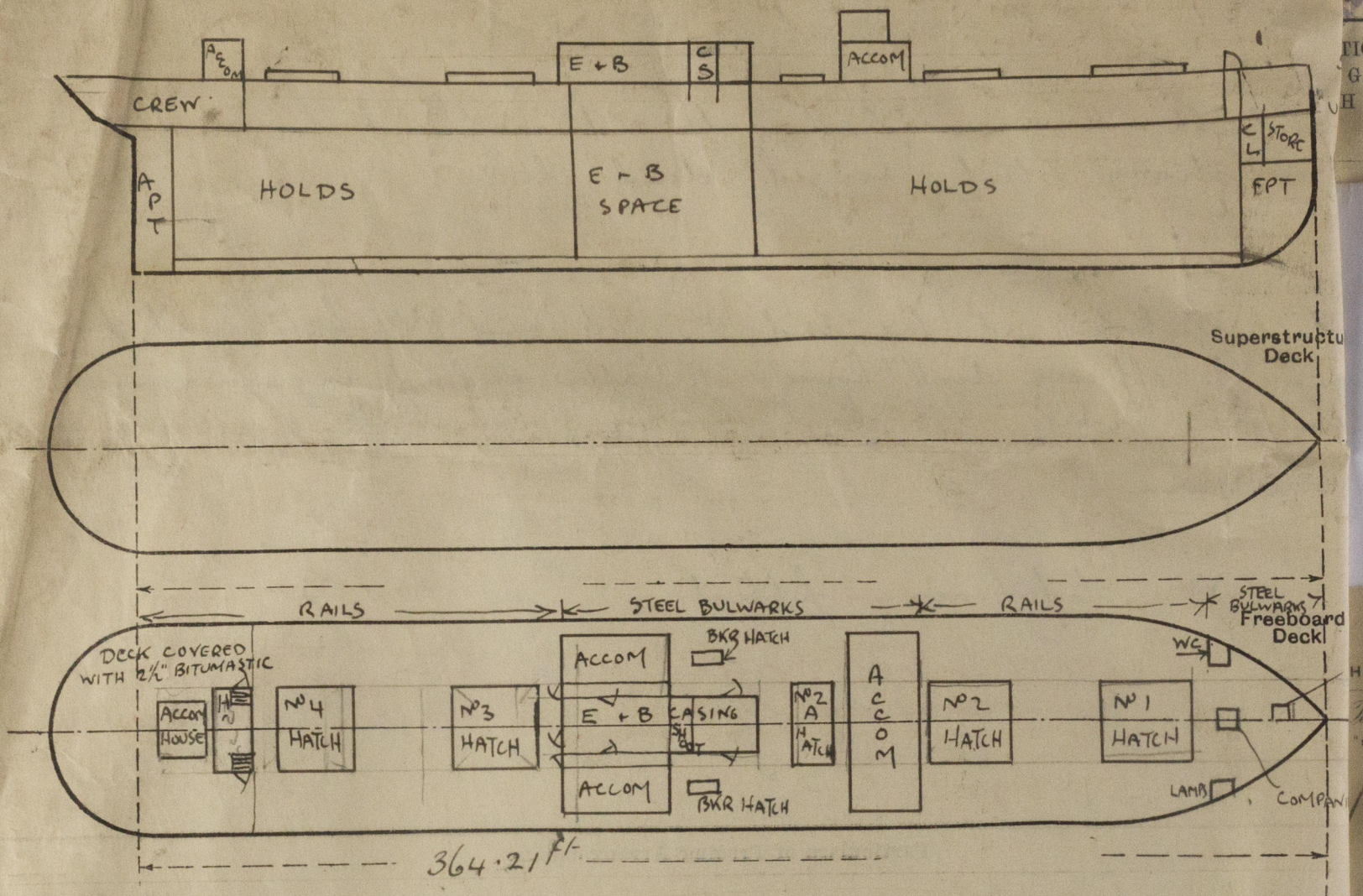
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead								
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	50	40	4" x 4" x 38'0"	48"	Brackets 4 off 4'-6" x 1'-11"	4 off 4'-6" x 1'-11"	14"	7'-3"
Exposed Machinery Casings on Superstructure Decks		✓			✓	2 off 4'-6" x 1'-10"	19"	20"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances		✓			✓			
Deckhouses on Flush Deck Ships	36	32	3 1/2" x 3 1/2" x 40'0"	42"	✓	4 off 4'-9" x 1'-11"	19"	7'-3"

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

Poop Bulkhead	✓
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	Strong teak doors operated both sides

Steel doors to ER + fidley, wood to accommodation passages + to ER openings off passage Operated both sides

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangways, coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



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

Extreme displac ^t	Draft	Tons per inch
9771	23'	37.67
9320	22'	37.63

Vessel examined in dry dock. General examination in progress. for amended SS N° 3 date see Secretary's letter.

Builder's name and yard number

J Priestman & Co Sunderland

Names of sister ships

Owners

Sun Shipp^g Co Ltd Mitchell Cotts & Co (Mgros)

Fee £

12 : 15 :

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