



### COMPUTATION OF FREEBOARD.

Length on summer load line **349.25'** Moulded Breadth **50.0** Moulded Depth **25.9'** Depth of Keel  
 Moulded displacement (ex bossing) at moulded draught of 85 per cent. of moulded depth **8481** Tons  
 Co-efficient of fineness for use with tables  $\frac{\Delta \times 35}{L \times B \times D \times .85} = .7767$  **(76.77)**  
 Displacement and tons per inch immersion in salt water at summer load line **8427 E 35.1**  
 Moulded depth **25.75** Deduction for Fresh Water  $\frac{\Delta}{40T} = 6''$  6 inches  
 Stringer Plate **.033** Round of Beam Correction  
 Sheathing on exposed deck T  $(\frac{L-S}{L})$  **-** Ships Round of Beam **12.5** inches  
 Rise of floor (in sailers) Standard Round of Beam  $\frac{B \times 12}{50} = 12$   
 Depth for Freeboard (D) **25.783** Difference **.5**  
 Table Depth **23.283**  
 Depth Correction  $\frac{1}{130} \times 2.5 = 6.716''$  Correction  $\frac{\text{Difference}}{4} \times (1 - \frac{E}{L}) = \frac{.5}{4} \times (1 - \frac{12.5}{25.783}) = .0588''$   
 If restricted by superstructures

	Enclosed Length	Length of Overhang	Height	Mean Covered Length (S)	Height Correction	Effective Length (E)
Poop	39.97	-	9'	39.97	-	39.97
Raised Quarter Deck		F				
Bridge	106.17	A	9'	106.17	-	106.17
Forecastle <b>42.75 at sides</b>			8.6'	38.72		38.54
Trunk Aft						
Forward						
Tonnage Opening Aft						
Forward						
Totals				184.86		184.68

Standard Height of Superstructure **6.9925**  
 " " R.Q.D.  
 Percentage covered S/L = **52.93**  
 " " E/L = **52.87**  
 " from Table line A, B, (corrected for absence of forecastle if required) = **38.84%**  
 Percentage from Table by interpolation for Bridge less than .2L if required =  
 Deduction = **.3887** x **38.617** = **15.01**  
 Percentage from Table for Tankers (or Timber ships) =  
 Deduction =

Station	Actual Sheer	Standard Sheer	Effective Sheer	S.M.	Product
A.P.	48	44.92	48	1	48
1/2 L from A.P.	21.5	19.99	21.5	4	86
1/2 L from A.P.	5.5	4.94	5.5	2	11
Amidships	0	0	0	4	0
1/2 L from F.P.	12	9.88	12	2	24
1/2 L	48	39.98	48	4	192
F.P.	108	89.85	108	1	108
				18	469

Mean Actual sheer aft =  
 " Standard " "  
 Mean Actual sheer forward =  
 " Standard " "  
 Length of enclosed superstructure forward of amidships =  
 Length of Ship  
 Length of enclosed superstructure aft of amidships =  
 Length of Ship  
 Sheer Correction = Difference X  $(.75 - \frac{S}{2L}) = 3.595 \times .4853 = 1.7448''$   
 If limited on account of midship superstructure =  
 to maximum allowance of 1 1/2 ins. per 100 ft. =

TABULAR FREEBOARD corrected for flush deck if required = **56.29**  
 Correction for co-efficient =  $56.29 \times \frac{.4567}{1.36} = 60.3$

	+	-
Depth correction	6.72	
Deduction for superstructures		15.01
Sheer correction	1.74	
Round of Beam correction		.06
Correction for thickness of deck amidships		
Other corrections, scantlings, etc.		
	6.72	16.81
		-10.09
Summer Freeboard in inches		50.21
Additional allowance for superstructures on Timber carrying ships		
Summer Timber Freeboard in inches		

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 Draughts and Seasonal Corrections  
 Sailer, Tanker, Steamer  
 Timber  
 Depth to Freeboard Deck in feet **25.783**  
 Summer Freeboard in feet **4.184**  
 Moulded Draught (d) **21.599 = 21-7 1/2 (11)**  
 Addition for Keel  
 Extreme draught  
 Deduction for Tropical and addition for Winter freeboard  $d/4 = 5.40$  ins. **44.81**  
 Addition for Winter North Atlantic (if required) = ins.  
 Deduction for Tropical Timber Freeboard  $\frac{d}{4} = 5.40$  ins.  
 Addition for Winter " "  $\frac{d}{3} = 7.13$  ins.  
 " " N.A. Timber Freeboard (if required) = ins.  
**316**

$21.6 \times .78 \times 2 = 33.816$   
 $1.33 + 1/3 \times .78 = 5.95$



*Aligned*

SUMMER FREEBOARD recommended amidships from centre of disc to top of deck line, (..... <del>wood</del> 4 steel)	<b>4'-2"</b>	-1/2
TROPICAL FRESH WATER LINE above centre of disc	11"	
FRESH WATER LINE " " "	6"	-1/2
TROPICAL LINE " " "	5"	-1/2
WINTER LINE below " " "	5 1/2"	1/2
WINTER NORTH ATLANTIC LINE " " "	-	

SUMMER FREEBOARD recommended amidships from centre of disc to top of deck line		
TROPICAL FRESH WATER Timber line above centre of disc		
FRESH WATER " " " " "		
TROPICAL " " " " "		
WINTER " " below " " "		
WINTER NORTH ATLANTIC " " " " "		

	Coaming	Plating	Stiffeners	Spacing	End Attachments	No. and size of Openings	Height of Sills	Height of Casings
Poop Bulkhead		.35	5 1/2 x 3 x .376	30"	LUGGED T & B.	2 @ 5' x 3'-1"	1'-6"	-
R.Q.D. "								
Bridge Aft Bulkhead		.35	4 1/2 x 3 x .376	36"		2 @ 5' x 3'-1"	1'-7"	-
" Forward "	✓	.42	8 v 3 x .46 BA	30"	lugged top & bot.	2 @ 5' x 3'-2"	1'-8"	-
Forecastle Bulkhead		.26	3 v 3 x .35	36"		1 @ 7'-3"	1'-6"	-
Trunk, Aft								
" Forward								
Exposed Machinery Casings on Freeboard or R.Q. Decks								
Exposed Machinery Casings on superstructure decks	.36	.28	3' x 3' x .26	front 30" sides 36"	SIDE STIFF. BKTS T & B.	2 @ 5' x 2'	1'-6"	7-6
Machinery Casings within Superstructures not fitted with Cl. 1. closing appliances	SIDES -	.38	3 1/2' x 3' x .26"	24		(2-14'-6" x 14'-3"	18"	
	ENDS -	.38	3' x 3' x .26"	30	SIDES.	(S. 1-2'-5" x 2'-0"	17	
						(P. 1-5'-0" x 2'-0"		
Deckhouses on flush deck ships								

PARTICULARS OF CLOSING APPLIANCES (state if capable of being manipulated from both sides)

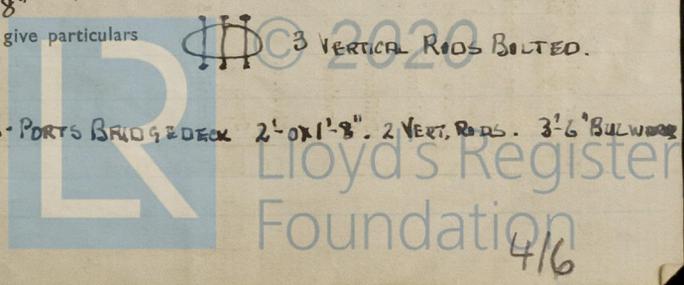
Poop Bulkhead	<del>Weather boards full height in channels riveted to bulk</del> <del>ALSO STEEL PLATES HELD BY cross bulk bolts</del> ✓ NO OPENING LETTER 2413147.
R.Q.D. "	
Bridge Aft Bulkhead	Weather boards full height in channels riveted to bulk. ✓
" Forward "	Hinged steel W.T. Doors DOGS 16" PITCH. OPEN FROM OUTSIDE ONLY. ✓
Forecastle Bulkhead	<del>NO CLOSING ARRANGEMENTS</del> 3 TEAK DOORS 5' x 2' 1 STEEL DOOR ALL HINGED & LOCKS <del>open passageway</del> HINGED WOOD DOOR WEATHERBOARDS FULL HEIGHT IN CHANNELS WELDED TO BULKHEAD 2413147
Exposed Machinery Casings on Freeboard or R.Q. decks	
Exposed Machinery Casings on superstructure decks	2 STEEL HINGED DOORS. 2 LOCKS STEEL RAIL; both sides
Machinery Casings within superstructures not fitted with Cl. 1. Closing Appliances	HINGED STEEL DOORS LOCKS. 3' x 2" TO ER. AFT SIDE CASING. both sides.
Deck houses on Flush Deck ships	

PARTICULARS OF FREEING ARRANGEMENTS

	Length of Bulwark	Height of Bulwark	No. and size of Freeing Ports each side	Area each side	Rule Area
After Well	86'-8"	4'	4 @ 3'-0" x 1'-6" 1 1/2"	18 sq ft ✓	17.33
Forward Well	73'-8"	4'	4 @ 3'-0" x 1'-6" 1 7/8"	18 sq ft ✓	14.73
State fore and aft position and height above deck to bottom of port, for each port		After Well 6"-8" sills Forward Well 6"-8" "	see sketch		

State whether freeing ports are fitted with shutters, bars or rails, and give particulars  3 VERTICAL RODS BOLTED.

Give particulars of freeing port area, etc., on superstructure decks 2-PORTS BRIDGE DECK 2'-0" x 1'-8". 2 VERT. RODS. 3'-6" BULWARK



PARTICULARS OF ALL HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Number and description of Hatchway from forward	1						BOAT DECK. SADDLE DECK.		1		POOP HATCH.	TUNNEL ESCAPE	POOP STORE HATCH
	1	2	3	4	5	3	BRIDGE & UPPER DECKS & BUNKER HATCHES	6'-6" x 16'-0"	7'-10" x 12'-0"	2'-0" DIA"	2'-5" x 3'-0"		
Dimensions of Hatchway	21'-8" x 18'	30'-4" x 22'	17'-4" x 18'	30'-4" x 18'	26' x 18'	17'-0" x 18"	8'-8" x 3'-10 1/2"	6'-6" x 16'-0"	7'-10" x 12'-0"	2'-0" DIA"	2'-5" x 3'-0"		
COAMINGS	Height above <del>wood</del> steel deck	33"	33"	33"	33"	16"	30" & 9"	10"	18	17"	24"		
	Thickness sides ends	44	44	44	44	44	44 38	38	38"	PATENT STEEL	38		
	Stiffeners	7-3-4BA side off end	8-3-4BA side Forward	7-3-4BA side	8-3-4BA side off end	7-3-4BA side Forward	-	-	-	WT. COVER HINGED.	-		
	Brackets or Stays	2 STAYS	2 STAYS	1 STAY	2 STAYS	2 STAYS	-	-	-	-	-		
HATCH BEAMS	Number	4	5	3	5	4	3	3	4	-	-		
	Spacing	4'-4"	5'-1" x 5'	4'-4"	5'-1" x 5'	5'-3" x 5'-2"	4'-3"	-	3'-11"	-	-		
	Scantling and Sketch	T 4x3-44 15x36	T 4x3-46 19x36	T 4x3-44 12x3	as N° 2	T 4x3-44 16x36	1"x3"x44 15"x3"	-	J 3x3x38 8" BA.	-	-		
	Bearing Surface and thickness of carriers or sockets	3" x .5	3" x .5	3" x .5	3" x .5	3" x .5	3" x .5	3"	-	-	-		
FORE AND AFTERS	Number	none					none						
	Spacing	none					none						
	Unsupported lengths	none					none						
	Scantling and Sketch	none					none						
HATCH COVERS	Material	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD		
	Thickness	3"	3"	3"	3"	3"	2 1/2"	3"	3	3	2 1/2		
	How Fitted	F+A	F+A	F+A	F+A	F+A	F 2A.	F 2AATH.	F 2A.	F 2A.	F 1A.		
	Bearing Surface	3"	3"	3	3"	3"	3"	2 1/2"	2 1/2"	2 1/2"	2 1/2"		
Spacing of Cleats	22"	22"	22"	22"	22"	24"	ENDS 35" SIDES 22"	24"	24"	24"			
Number of Tarpaulins	3	3	3	3	3	2	2	2	2?	2			

5/6

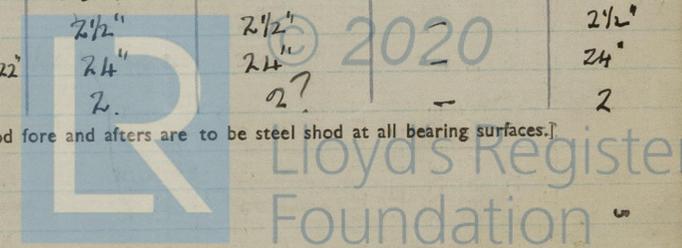
Are wood fore and afters steel shod at all bearing surfaces?

[Surveyors are to note that wood fore and afters are to be steel shod at all bearing surfaces.]

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 RING BOLTS.

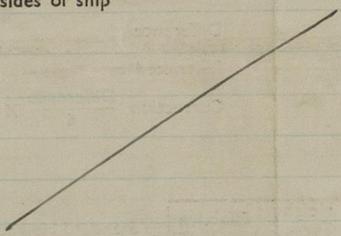


COMPUTATION OF FREEBOARD

Gangways and Lifelines

Each side in forward hull  
Tunnel escape aft for access to Steering Gear

Gangway, Cargo and Coaling Ports in sides of ship



SUPPLEMENTARY REQUIREMENTS FOR STEAMER CARRYING TIMBER DECK CARGOES

Do Superstructures and Machinery Casings comply with rules ?

Is provision made for protection of steering gear, and is emergency steering gear provided ?

Are efficient uprights, sockets and lashings provided according to rules ?

State particulars of longitudinal subdivision in double bottom

State particulars of Bulwarks and Rails

Approval date of plans and full particulars of arrangements for stowing and securing timber

The scantlings and protective arrangements being in accordance with the Freeboard rules it is submitted that the freeboard be assigned

*[Signature]* 2020

Chief Surveyor.

Passed at a meeting of the Committee of Management of the British Corporation Register of Shipping and Aircraft

on the 22<sup>nd</sup> June 1932



Lloyd's Register of Shipping and Aircraft  
*[Signature]*  
Secretary.