

1 MAY 1932

Index. No. 31316
(For London Office only.)Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having *Shelter deck with T.O. aft*

Port of Survey *Alexandria*

Date of Survey *15 April 1932*

Name of Surveyor *H. Broke*

Particulars of Classification *7.100.A.1*
Well-Keelboard

Ship's Name *Glenbank* Nationality and Port of Registry *British Glasgow* Official Number *147907* Gross Tonnage *5153* Date of Build *1924*

Moulded Dimensions: Length *419.5* Breadth *53.45* Depth *29.17*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *12350* tons

Coefficient of fineness for use with Tables *.773*

Depth for Freeboard (D) *29.17*

Depth correction (a) Where D is greater than Table depth (D-Table depth) R = *(29.20 - 27.96) / 3 = 4.1 3.42*

(b) Where D is less than Table depth (if allowed) (Table depth-D) R = *3.42*

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) *53.45*

Standard Round of Beam = $\frac{B \times 12}{50} = 12.90$

Ship's Round of Beam = *13*

Difference *even* *.10*

Restricted to

Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.10}{4} \times .0078 = .00195$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	23.54	23.54	8'0"	✓	23.54
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	390.71	390.71	8'0"	✓	390.71
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	5.25	2.62	8'0"	✓	2.62
" forward ...					
Total ...	419.50	416.87			416.87

Standard Height of Superstructure *4.5*

" " R.Q.D. *✓*

Deduction for complete superstructure *42.00*

Percentage covered $\frac{S}{L} = 100$

" " $\frac{S_1}{L} = 99.37$

" " $\frac{E}{L} = 99.37$

Percentage from Table, Line A. (corrected for absence of forecastle (if required))

Percentage from Table, Line B. (corrected for absence of forecastle (if required)) *99.22*

Interpolation for bridge less than 2L (if required)

Deduction = *42 x 99.22 = 41.67*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
... ..	51.95	1		51.95	48. -	57.50	1		57.50
from A.P. ...	23.12	4		92.48	19.75	25.59	4		102.36
" ...	5.71	2		11.42	4.92	6.33	2		12.66
amidships ...	-	4		-	-	-	4		-
from F.P. ...	11.43	2		22.86	13.99	14.25	2		28.50
" ...	46.24	4		184.96	56.09	57.63	4		230.52
F.P. ...	103.90	1		103.90	120. -	129.50	1		129.50
Total ...				467.57					561.04

Mean actual sheer aft = *even*

Mean standard sheer aft = *even*

Mean actual sheer forward = *even*

Mean standard sheer forward = *even*

Length of enclosed superstructure forward of amidships = *3 P.P.*

" " aft of " = *4.6*

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{93.47}{18} \times .25 = (-) 1.30$$

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 = *29.20* ✓

Summer freeboard = *3.64* ✓

Moulded draught (d) = *25.56* ✓

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = *6.39* ✓

Addition for Winter North Atlantic Freeboard (if required) = *6½*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ = *12836*

Tons per inch immersion at summer load water line

T = *45.63*

Deduction = $\frac{\Delta}{40T}$ inches = *7.03*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.773 + .60}{1.36} = \frac{1.453}{1.36}$

Depth Correction ... *3.42* ✓

Deduction for superstructures ... *41.67* ✓

Sheer correction ... *1.30* ✓

Round of Beam correction ... *✓*

Correction for Thickness of Deck amidships ... *✓*

Other corrections, scantlings, etc. ... *✓*

Summer Freeboard = *44.64*

Final Freeboard = *82.96*

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

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Tropical Fresh Water Line above Centre of Disc ... *13½* ...

Fresh Water Line " " ... *7* ...

Tropical Line " " ... *6½* ...

Winter Line below " " ... *6½* ...

Winter North Atlantic Line " " ... *6½* ...

Tropical Fresh Water Freeboard ... *2 - 6¼* ...

Fresh Water " " ... *3 - 0¾* ...

Tropical " " ... *3 - 1½* ...

Winter " " ... *2 - 2½* ...

Winter North Atlantic " " ... *2 - 2½* ...

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Superstructure					Shell in tween deck					
Description of Hatchway	1	2	3	4, 5 & 6	1	2	3	4	5	6
Dimensions of Hatchway	24'-0" x 20'-0"	21'-6" x 22'-0"	25'-0" x 22'-0"	26'-3" x 22'-0"	As superstructure	13'-6" x 22'-0"	10'-6" x 9'-0"	As superstructure	As superstructure	As superstructure
COAMINGS	Height above Deck	30"	30"	30"	9"	9"	9"	15"	9"	9"
	Thickness	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4
	Stiffeners	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
	Brackets, Stays	6 in W	6 in W	6 in W	6 in W	6 in W	6 in W	6 in W	6 in W	6 in W
HATCH BEAMS	Number	5	5	5	5	5	1	5	5	5
	Spacing	5'-0"	6'-0"	5'-0"	5'-0"	5'-0"	Steel	5'-0"	5'-0"	5'-0"
	Scantling and Sketch	PL 1 1/2" x 36	20" x 37	14" x 34	14" x 34	14" x 34	Same as superstructure	14" x 34	14" x 34	14" x 34
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"
FORE AND AFTERS	Number	—	—	—	—	—	—	—	—	—
	Spacing	—	—	—	—	—	—	—	—	—
	Unsupported Lengths	—	—	—	—	—	—	—	—	—
	Scantling* and Sketch	—	—	—	—	—	—	—	—	—
HATCH COVERS	Material	Wood	Wood	Wood	Wood	Wood	Wood	Steel	Wood	Wood
	Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	4/4	2 1/2"	2 1/2"
	How fitted	Flush	Flush	Flush	Flush	Flush	Flush	Flush	Flush	Flush
	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	4"	3 1/2"	3 1/2"
Spacing of Cleats	23"	—	—	—	—	23"	—	—	23"	—
Number of Tarpaulins	3	—	—	—	—	3	—	—	3	—
*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? No Lashings. Steel locking battens fitted										

Particulars of fiddle, funnel and ventilator coamings: — Height of fiddle: all cut up 8'-0"

The coamings of all ventilation above the mainmast, both rooms, engine, Officer's quarters on shell deck are of good height, also galley & main saloon, & are in good condition & order.

Particulars of Flush Bunker Scuttles: — None

Particulars of Companionways: — One forward to crew quarters shell deck space 2 entrances.

Steel. Height 6'-9" above wood deck. Width 6'-1". Length 8'-6". Thickness of plating 3/8" up from deck. Atmosphere height of fill 12". Opening, upper height 5'-9". Width 2'-2". Two Teak doors closed with brass locks opening each side.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: — Hold ventilators 4 in W to each hold

Telescopic from shell deck to lower holds. Average height of coaming 5'-0" to 6'-0" x 4/4. All of substantial construction & in good order, & fitted with efficient closing mechanism, caps & canvas covers. All other ventilation to crew quarters, peaks, shell deck spaces are in good order as by the Rules.

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

All air pipes are of the goose neck type from the bottom & fuel tanks 3" & 4" dia. height 2'-0" to 6'-0" & openings are fitted with screened perforated boards closed at ends. Depth 8"

Gangway Cargo and Coaling Ports: — None. Port & Starboard side openings in way of Middle line space 24" x 19". There appear to be freeing ports in the tonnage tank. 9/14/41.



Particulars of Scuppers and Sanitary Discharge Pipes = Superstructure deck. Crew deck houses, Mast. Lavatories and Officer's quarters.
 Port & starboard from Officer's quarters - Port. Starboard. to sheets in deck space or deck = steel pipes.
 2 1/2" diam. to the main discharge 4 1/2" fitted with an automatic non return valve; accessible
 Scuppers. Port & Starboard sheets in lower deck. 6 forward - 6 aft - 3 1/2" fitted with automatic non return valves. One only fitted in each discharge on starboard side. In good condition.
 Particulars of Side Scuttles: Fitted in sheets in deck crew space forward & after fore space (Hue room) only.
 All in good condition & fitted with attached deadlights for closing. Dra. 12

Particulars of Guard Rails: Sheets deck. Steel bulwarks & stays from stem to stern Forecastle Bulkhead.
 also in way of amidships deck house & erection. between spaces. Standard & Handrails.
 Height of bulwarks. Height of bulwarks & guard rails from deck 3'-9" rail spacing 9"
 Spacing Rail Handrails 4'-10 1/2". Portable Guard rails fitted in way of cargo hatchways.

Particulars of Gangways, Lifelines, etc.: Life lines - none fitted.

Gangways on Superstructure deck. Port. Starboard amidships for accommodation.
 Staged to steel brackets on deck stringer angle with locking bolts. Platform steel angle
 framing & fitted with rail Handrails. Substantial & according to the Rules.
 All guard rails.

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 ... } After Well:— (F. and A. position and height above deck edge) } 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.						

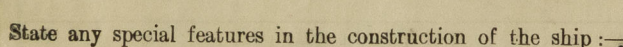
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	✓	.25	4x2 1/2 x 9/16	28"	None	(2) 6'-0" x 3'-6"	18"	8'-0"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	✓	.25	4x2 1/2 x 9/16	28"	None	(2) 6'-0" x 3'-6"	18"	8'-0"
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...								
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks ...								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances30	3x3x.35	31"	Blk	None		
all Deckhouses on Flush Deck Ships ...	Deck angle	3/8"	3" angle	4'-0"	—	5'-9" x 2'-0"	12" sills	8'-0"

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

Poop Bulkhead ...	2 1/2" storm boards in riveted channels.
Raised Quarter Deck Bulkhead ...	2 1/2" ✓
Bridge, After Bulkhead ...	2 1/2" storm boards in riveted channels.
Bridge, Forward Bulkhead ...	
Forecastle Bulkhead ...	
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	
Exposed Machinery Casings on Superstructure Decks ...	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	No openings.
Deckhouses on Flush Deck Ships ...	All openings to Deckhouses provided at after end. Leak water leaked down by the

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 shewn on the following sketches:—



T. Bishop.

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