

4 MAR 1932

Rpt. C.11

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **30780**
(For London Office only.)

18139.

Computation of Freeboard for Steamer, ~~Sailing Ship~~, Tanker
having Forecastle, Bridge & R.Q.D.

(Type of Superstructures.)

Ship's Name Majorca Nationality and Port of Registry British Leith Official Number 147196 Gross Tonnage 426 Date of Build 1921

Moulded Dimensions: Length 220.0' Breadth 35.0' Depth 15'-10"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 2270 tons

Coefficient of fineness for use with Tables .767

Port of Survey Leith

Date of Survey 29th Feb^y 1932

Name of Surveyor John Houston

Particulars of Classification +100 A1

Depth for Freeboard (D)

Moulded depth 15.83

Stringer plate04

Sheathing on exposed deck ✓

$T \left(\frac{L-S}{L} \right) =$ ✓

Depth for Freeboard (D) = 15.87

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R = ✓
(15.87-14.65) 1.692 + 2.028 = +2.03"

(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) 35.0

Standard Round of Beam = $\frac{B \times 12}{50} =$ 8.4"

Ship's Round of Beam = 9.0"

Difference .6"

Restricted to

Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) =$ $\frac{.6}{4} \times (1 - \frac{.70}{220}) = .0495$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...				
" overhang ...				
R.Q.D. enclosed ...	<u>77.0</u>	<u>3.5'</u>	<u>3.50</u>	<u>70.92</u>
" overhang ...				
Bridge enclosed ...	<u>54.0</u>	<u>7.0'</u>	<u>✓</u>	<u>54.0</u>
" overhang aft ...				
" overhang forward ...				
Wale enclosed ...	<u>23.0</u>	<u>7.0'</u>	<u>✓</u>	<u>23.0</u>
" overhang ...				
Trunk aft ...				
" forward ...				
Tonnage opening aft ...				
" forward ...				
Total ...	<u>154.0</u>			<u>147.92</u>

Standard Height of Superstructure 6.0'

" " R.Q.D. 3.80

Deduction for complete superstructure 28"

Percentage covered $\frac{S}{L} =$ 70%

" " $\frac{S_1}{L} =$ 67.2%

" " $\frac{E}{L} =$ 67.2%

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

Percentage from Table, Line B.
(corrected for absence of forecastle (if required)) = .5831

Interpolation for bridge less than .2L (if required)

Deduction = 28.0 x .5831 = 16.33

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
P. ...	<u>32.0</u>	1		<u>32.0</u>	<u>34.5</u>	<u>34.00</u>	1		<u>34.00</u>
L from A.P. ...	<u>14.24</u>	4		<u>56.96</u>	<u>15.0</u>	<u>16.59</u>	4		<u>66.36</u>
L " ...	<u>3.52</u>	2		<u>7.04</u>	<u>2.25</u>	<u>4.14</u>	2		<u>8.28</u>
amidships ...	<u>0</u>	4		<u>0</u>	<u>0</u>	<u>0</u>	4		<u>0</u>
L from F.P. ...	<u>7.04</u>	2		<u>14.08</u>	<u>8.25</u>	<u>7.88</u>	2		<u>15.76</u>
L " ...	<u>25.48</u>	4		<u>113.92</u>	<u>27.75</u>	<u>31.60</u>	4		<u>126.40</u>
P. ...	<u>64.0</u>	1		<u>64.0</u>	<u>71.25</u>	<u>73.00</u>	1		<u>73.00</u>
Total ...				<u>288</u>		<u>323.80</u>			<u>323.80</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ $\frac{323.80 - 288}{18} \times \left(.75 - \frac{154}{440} \right) = .39 = .80$

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
P. ...	<u>32.0</u>	1		<u>32.0</u>	<u>34.5</u>	<u>34.00</u>	1		<u>34.00</u>
L from A.P. ...	<u>14.24</u>	4		<u>56.96</u>	<u>15.0</u>	<u>16.59</u>	4		<u>66.36</u>
L " ...	<u>3.52</u>	2		<u>7.04</u>	<u>2.25</u>	<u>4.14</u>	2		<u>8.28</u>
amidships ...	<u>0</u>	4		<u>0</u>	<u>0</u>	<u>0</u>	4		<u>0</u>
L from F.P. ...	<u>7.04</u>	2		<u>14.08</u>	<u>8.25</u>	<u>7.88</u>	2		<u>15.76</u>
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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway		N ^o 1.	N ^o 2.	N ^o 3.	N ^o 4.	Boat Hatch on Boat Deck to Cross Bunkers	Boat Hatch on Boat Deck to Saddle Tank	Boat Hatch on Bridge Deck 1 each side	Hatch in Forecastle to Store Room	Hatches in Centia Under Hatch on Boat Deck on Bridge Deck	Hatches in Bridge Space 1 each side Under Hatch on Bridge Deck
Dimensions of Hatchway		23'0" X 15'0"	21'9" X 15'0"	19'2" X 15'0"	17'3" X 15'0"	4'0" X 14'0"	3'9" X 14'0"	2'0" X 1'10"	2'3" X 2'4"	7'6" X 14'0"	11'6" X 2'0"
COAMINGS	Height above Deck	31" sides 34" centre	✓			1'0"	1'0"	9"	2 1/2" angle	1'0"	1'0"
	Thickness	4 1/4"	✓	As N ^o 1.		4 1/4"	4 1/4"	3 1/8"	✓	3 1/2"	3 1/2"
	Stiffeners	7" X 3" X 4 1/2"	✓			✓	✓	✓	✓	✓	✓
	Brackets, Stays	2 each side 4" Bush plate	✓			✓	✓	✓	✓	✓	✓
HATCH BEAMS	Number	4	4	3	4	None		None	✓	✓	✓
	Spacing	4'7"	4'4 1/2"	4'9 1/2"	4'4"						
	Scantling and Sketch	13 1/2" X 3 1/2" Plate Angles 10" deep at end	✓	As N ^o 1							
Bearing Surface		3"									
FORE AND AFTERS	Number					None		None	✓	✓	✓
	Spacing										
	Unsupported Lengths Scantling* and Sketch										
Bearing Surface											
HATCH COVERS	Material	Wood				Wood	Wood	Wood	Wood	Wood	Wood
	Thickness	2 1/2"	As N ^o 1			2"	2"	2 1/2"	3"	2 1/2"	2 1/2"
	How fitted	sole + aft.				sole + aft.	sole + aft.	1 off.	1 off.	sole + aft.	1 off.
	Bearing Surface	3"				2"	2"	2"	3"	3"	3"
Spacing of Cleats		22"	As N ^o 1			20"	20"	2 off each side	✓	24"	24"
Number of Tarpaulins		2				2	2	2	✓	2	2
<p>*Are wood fore and afters steel shod at all bearing surfaces? ✓</p> <p>Are battens and wedges efficient and in good condition? yes.</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? yes.</p> <p>Are lashings provided in accordance with rule requirements? yes.</p>											

Particulars of fiddle, funnel and ventilator coamings:— The stokehold gratings are covered by strong steel hinged covers. The fiddle & funnel ventilators are in efficient condition. The Engine Room skylight is of steel, strongly constructed.

Particulars of Flush Bunker Scuttles:— None fitted.

Particulars of Companionways:— None fitted.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
 1 Vent. on Forecastle 14" dia! Coaming 36" X 36 led to N^o 1 hold. 2 Vents. on R & D. 12" dia! Coaming 36" X 34 led to N^o 3 hold.
 1 " " Foredeck 12" " " 36" X 34 " " " 1 Vent. " " " " " 4 "
 2 Vents " " 12" " " 36" X 34 " N^o 2 "

All ventilators are constructed in accordance with the Rules & can be closed with wood plugs & canvas covers.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
 On Forecastle 1-3" dia! 6" from deck led to forepeak. All air pipes can be closed with wood plugs.
 " Foredeck 3-3" " 1 1/2" " " " " N^o 1 tank.
 " R. & D. 2-3" " 30 " " " " 5 "
 " " 2-3" " 30 " " " " 6 "
 " After Bulwarks 2-3" " 34 " " " " after peak.

Particulars of Gangway Cargo and Coaling Ports:— None fitted.



Particulars of Scuppers and Sanitary Discharge Pipes —

2. Scupperns - 1 port, 1 starb. at after end of forewell. } Hinged plates riveted to shell + deck.
2. " " at fore " " R.Q.D. }
1. Soil pipe on starb. bow. } from crew's quarters fitted with storm valves on scuppern.
1. " " quarters }
2. " pipes amidships 1 port, 1 starb. from midships accommodation fitted with storm valves on shell plating in bridge deck space.

Particulars of Side Scuttles:

Particulars of Side Scuttles: Four each side - 9' dia. - on forecastle sheerstrake - fitted with dead lights. + of sub-stantial construction. ✓

Particulars of Guard Rails :—

Open rails on forecastle - 3 rails 12" apart, stanchions 4'-0" apart. ✓
 Steel bulwarks on forewell 4'-9" mean height }
 " " " R.Q.D. 3'-9" " " } all efficiently constructed & supported. Stanchions
 " " " bridge deck 3'-0" " " } 7" bulb plate about 5'-6" apart. ✓

Particulars of Gangways, Lifelines, etc. :—

Josedeck :- Plank gangway from ladder to No 2 hatch, & from No 2 hatch to No 1 hatch, fitted with the necessary stanchions & lifelines. ✓

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 <i>Raised P. Deck</i>	84'-3"	4'-9"	3'-0" x 1'-6"	3 . 4	13½ 18 ft.	17 16.85 ft.
Forward Well	65'-9"	3'-9"	3'-3" x 2'-1"	2	13½ ft.	13¾ 13.15 ft.

State position of each freeing port } After Well :- 1-15'-9" from after end of bridge deck, 1-35'-3" from ditto. 1-62'-3" from ditto.
(F. and A. position and height above deck edge) } Forward Well :- 1-11'-0" " fore " " " 1-42'-0" " "

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- after Well : aft part: 2 horizontal bars 6" apart.
other " 4 vertical " 7" "
Fore Well :- 4 vertical bars 8" apart.

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

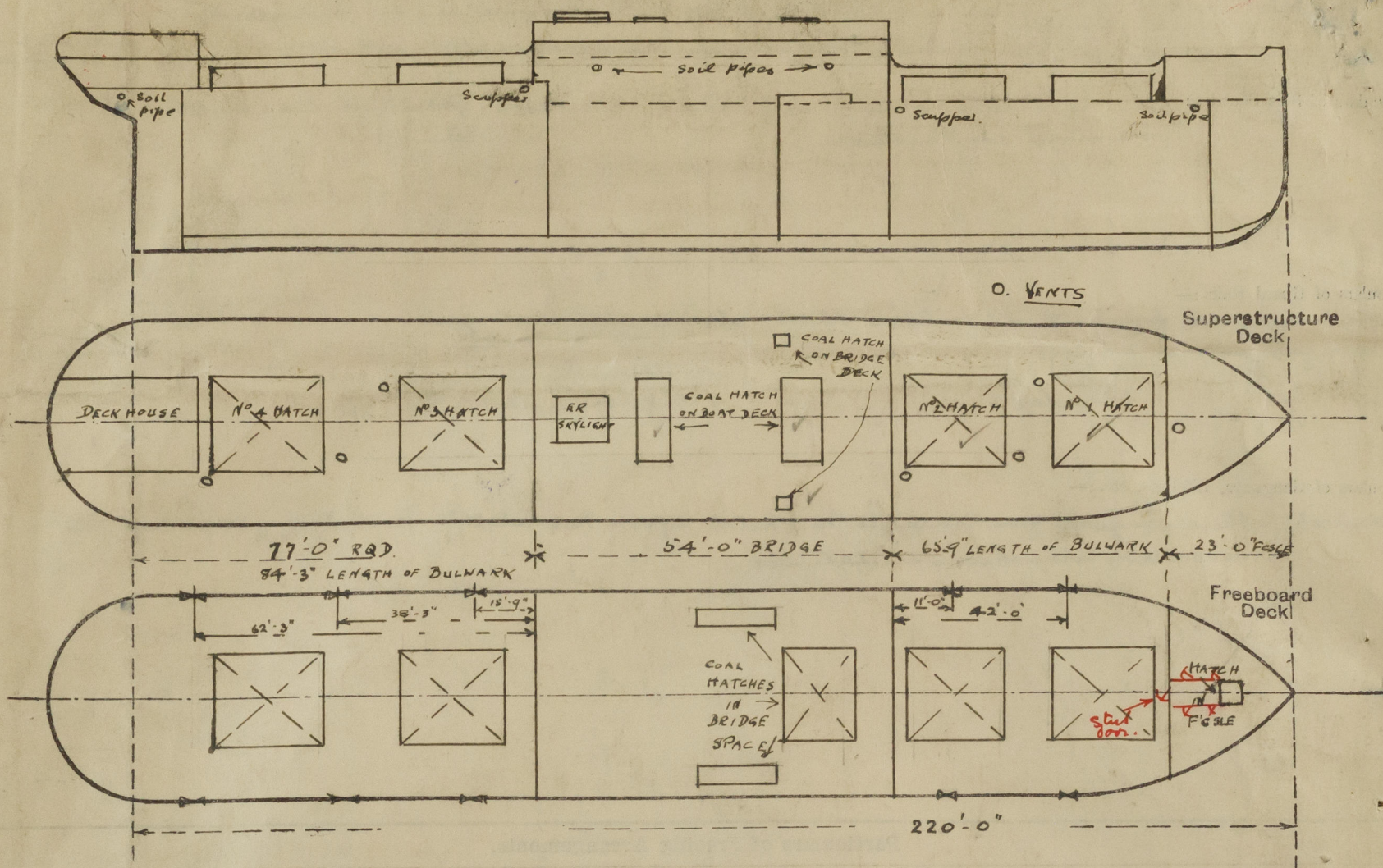
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	34	34	6" X 3" X 44 BA	3'-3"	✓	2'-0" X 2'-0"	12" ✓	3'-6"
Bridge, Forward Bulkhead	34	30	6" X 3" X 44 BA	2'-6"	Brackets top & bottom	4'-4" X 3'-8"	20"	7'-0"
Forecastle Bulkhead	34	30	3" X 3" X 30 LS	3'-0"	✓	4'-4" X 1'-10"	19"	7'-0"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super- structure Decks	32	32	3" X 3" X 30 LS	3'-0"	Brackets at top on sides of ER	4'-6" X 1'-10"	19"	7'-0"
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships ...	✓							

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

Poop Bulkhead	...	...	...	✓
Raised Quarter Deck Bulkhead	...	...	...	✓	no openings
Bridge, After Bulkhead	...	...	...		Storm boards in channels for full depth, & these are covered by steel plates permanently jointed & bolted with through bolts 3" pitch.
Bridge, Forward Bulkhead	...	...	...		portable plate Steel doors, hinged at centre of height, horizontally, secured with lock bolts & nuts spaced 6' apart. manipulated on outside and ^{passing}
Forecastle Bulkhead	...	...	...		hinged steel door outside, wooden door inside. 4'-4" X 1'-10" ^{thru bulkhead plating} , both fitted with locks & handles, manipulated from both sides. 3 Scuttles 9" dia. 5'-0" from deck.
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	...	...	...
Deckhouses on Flush Deck Ships	...	...	...	✓	Steel doors, hinged, 4'-6" X 1'-10", manipulated from both sides with locks & handles.

Majunga.

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:—

Timber Deck Cargoes

The steering rods and chains are entirely enclosed by steel channels along the deck between the hatches and by steel plates bolted to the hatch coaming bracket stays in way of the hatches. Secondary means of steering by means of screw gear are provided in the after deck house, in the event of a breakdown in the main steering arrangements. The double bottom tanks within the midship half length ~~to~~ ^{sub} is divided longitudinally by means of bolted plate washer over the holes in the centre girder, except those holes in way of the stumps which have been left for drainage purposes. Strong metal sockets are fitted to the bulwark rail 10ft apart, to take the uprights, and lashings are provided to secure the head of the uprights to the bulwark stanchions. Eyeplate for lashings are riveted to the sheerstrake 10ft apart, and the end eyeplate is 6'-6" from the superstructure bulkheads.

Builder's name and yard number Duse & B. Co Ltd, Gool.

Names of sister ships ✓

Owners Leith Hull Steamship & P. & K. Co (Jas. Currie & Co. Managers).

Fee £ 8 : 10 : 0 Received by me [Signature]

John Houston
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Lloyd's Register
Foundation