

21 APR 1932

Rpt. C.11.

Index. No. **29982**
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

WEEK END
No. 159 Section 2

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having *Complete Superstructure with Forecastle Deck*

(Type of Superstructures.)

Port of Survey *Cardiff*

Date of Survey *14/15/4/32*

Name of Surveyor *W. B. Marlborough*

Particulars of Classification *100A1 with Freeboard*

Ship's Name *"LEDBURY"* Nationality and Port of Registry *British London* Official Number *147592* Gross Tonnage *3528* Date of Build *1912*

Moulded Dimensions: Length *366.5* Breadth *50.50* Depth *24.41*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *8600* tons

Coefficient of fineness for use with Tables *784*

Depth for Freeboard (D) *24.41*

Moulded depth ... *24.41*

Stringer plate ... *(.45) .32* ... *.03*

Sheathing on exposed deck *✓*

T $\left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) = *24.44*

Depth correction

(a) Where D is greater than Table depth (D-Table depth) R = *(24.44 - 24.43) 2.819 = +.033*

(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) *50.50*

Standard Round of Beam = $\frac{B \times 12}{50} =$ *12.12*

Ship's Round of Beam = *12" 6"*

Difference *6.12*

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ *$\frac{6.12}{4} \times .0071 = .01$*

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Pop enclosed ...	<i>14.00</i>	<i>17.00</i>	<i>4.83</i>		<i>14.00</i>	
" overhang ...	<i>1.58</i>	<i>.79</i>			<i>.79</i>	
R.Q.D. enclosed	<i>✓</i>	<i>✓</i>			<i>✓</i>	
" overhang	<i>✓</i>	<i>✓</i>			<i>✓</i>	
Bridge enclosed...	<i>343.00</i>	<i>343.00</i>			<i>343.00</i>	
" overhang aft ...	<i>.67</i>	<i>.50</i>			<i>.50</i>	
" overhang forward	<i>38.16</i>	<i>4.85 + 2.50</i>				
" ele enclosed ...	<i>.29</i>					
" overhang ...						
Trunk aft ...	<i>✓</i>					
" forward ...	<i>✓</i>					
Tonnage opening aft ...	<i>4.25</i>	<i>2.61</i>	<i>1/2 diff</i>		<i>2.61</i>	
" " forward						
Total ...	<i>366.5</i>	<i>363.90</i>			<i>363.90</i>	

Standard Height of Superstructure *7.165*

" " R.Q.D. *✓*

Deduction for complete superstructure *39.77*

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

" " $\frac{S_1}{L} =$ *99.29*

" " $\frac{E}{L} =$ *99.29*

Percentage from Table, Line A. *.9913*
(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 = *39.77 + .9913 = 39.42*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft	Mean standard sheer aft
A.P. ...	<i>46.65</i>	<i>1</i>		<i>46.65</i>	<i>32.50</i>	<i>40.50</i>	<i>1</i>		<i>40.50</i>		
1/4 L from A.P. ...	<i>20.76</i>	<i>4</i>		<i>83.04</i>	<i>14.22</i>	<i>18.02</i>	<i>4</i>		<i>72.08</i>		
3/4 L " ...	<i>5.13</i>	<i>2</i>		<i>10.26</i>	<i>3.54</i>	<i>4.46</i>	<i>2</i>		<i>8.92</i>		
Amidships ...		<i>4</i>		<i>0</i>			<i>4</i>				
3/4 L from F.P. ...	<i>10.26</i>	<i>2</i>		<i>20.52</i>	<i>11.42</i>	<i>11.28</i>	<i>2</i>		<i>22.56</i>		
1/4 L " ...	<i>41.52</i>	<i>4</i>		<i>166.08</i>	<i>45.82</i>	<i>45.64</i>	<i>4</i>		<i>182.44</i>		
F.P. ...	<i>93.30</i>	<i>1</i>		<i>93.30</i>	<i>94.50</i>	<i>102.50</i>	<i>1</i>		<i>102.50</i>		
Total ...	<i>419.85</i>			<i>419.85</i>	<i>+8</i>				<i>429.00</i>		

Mean actual sheer aft = *Defic not less than 75%*

Mean standard sheer aft

Mean actual sheer forward = *excess*

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = *C.S. 3*

" " aft of " =

Actual sheer at 1/4 L *7.83*

Standard *7.16*

6.7

= 8"

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ *$\frac{9.15}{18} (.75 - .50) = -.13$*

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.

Depth to Freeboard Deck = *24.44*

Summer freeboard = *2.21*

Moulded draught (d) = *22.23*

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = *5.56* *5 1/2*

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ *9360*

Tons per inch immersion at summer load water line

T = *38.6*

Deduction = $\frac{\Delta}{40 T}$ inches = *6.06*

6"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient *$\frac{784 + 68}{136}$*

Depth Correction ... *.03*

Deduction for superstructures ... *39.42*

Sheer correction ... *.13*

Round of Beam correction ... *.01*

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

.04 *39.55* *39.51*

Summer Freeboard = *26.53*

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

Tropical Fresh Water Line above Centre of Disc	<i>1 1/2"</i>
Fresh Water Line	<i>6"</i>
Tropical Line	<i>5 1/2"</i>
Winter Line below	<i>5 1/2"</i>
Winter North Atlantic Line	<i>✓</i>

Tropical Fresh Water Freeboard	<i>2 1/2"</i>
Fresh Water	<i>1 3/4"</i>
Tropical	<i>1 1/2"</i>
Winter	<i>1 1/2"</i>
Winter North Atlantic	<i>✓</i>

MARKING FORM
2-AUG 1935
RECEIVED

28 JAN 1933

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Freeboard Deck					Superstructure Deck					
Description of Hatchway	No 1	No 2	No 3	No 4	No 5	No 1	No 2	No 3	No 4	No 5
Dimensions of Hatchway	32'6" x 16'6"	32'6" x 16'6"	13'0" x 15'0"	32'6" x 16'6"	32'6" x 16'6"	32'6" x 16'6"	32'6" x 16'6"	13'0" x 15'0"	32'6" x 16'6"	32'6" x 16'6"
COAMINGS	Height above Deck	12"	12"	12"	12"	12"	12"	12"	12"	12"
	Thickness	.50	.50	.40	.50	.50	.50	.44	.50	.50
	Sides	.38	.38	.40	.38	.38	.38	.38	.38	.38
	Ends	✓	✓	✓	✓	✓	✓	✓	✓	✓
HATCH BEAMS	Stiffeners	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Brackets, Stays	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Number	3	3	3	3	3	3	3	3	3
	Spacing	4'0 3/4"	4'0 3/4"	6'6"	4'0 3/4"	4'0 3/4"	4'0 3/4"	6'6"	4'0 3/4"	4'0 3/4"
FORE AND AFTERS	Unsuported Lengths	AS	AS	AS	AS	AS	AS	AS	AS	AS
	Scantling* and Sketch	AS	AS	AS	AS	AS	AS	AS	AS	AS
	Bearing Surface	3 1/2"	3 1/2"	3"	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"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.
	Thickness	3"	3"	3"	3"	3"	3"	3"	3"	3"
	How fitted	F&A	F&A	F&A	F&A	F&A	F&A	F&A	F&A	F&A
	Bearing Surface	3, 4, 8	3, 4, 8	3, 4	3, 4, 8	3, 4, 8	3, 4	3, 4, 8	3, 4, 8	3, 4, 8
Spacing of Cleats	30"	30"	28"	30"	30"	24"	24"	24"	24"	24"
Number of Tarpaulins	2	2	2	2	2	2	2	2	2	2
*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?										

Particulars of fiddle, funnel and ventilator coamings:—

Stokehold Gratings covered by strong steel storm covers as per requirements ~~except~~ ~~P&S~~ Gratings which are not permanently hinged.
 Fiddle, funnel & Ventilator Coamings in efficient condition
 Engine Room Skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

NONE.

Particulars of Companionways:—

NONE.

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

1. to Forecastle	Coaming 10' dia. x 20' high x 25	} All Ventilator Coamings constructed in accordance with rule requirements. Coamings closed with deep shut iron lids & Canvas covers.
1 on Forecastle Deck	18' x 30' x 25	
ON SHELTER DECK { 4 to Hold	14' x 31' x 40	
2. to Fore Deck	8' x 20' x 30	
1. to Funnel	8' x 20' x 30	
1. to after store	11' x 30' x 30	

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

1. C.I. from Fore Peak Tank	4 1/2' dia. x 14' high on Fore Deck	} All gooseneck top & height measured to mouth No snifting or closing arrangements provided wood plugs & Canvas covers supplied.
1 W.I. " D.B. Tanks	3 1/2' x 15' on Shelter Deck	
1 W.I. " After Peak Tank	3 1/2' x 36' "	

Particulars of Gangway Cargo and Coaling Ports:—

NONE.



© 2020

Lloyd's Register Foundation

Particulars of Scuppers and Sanitary Discharge Pipes —

4 Scuppers each side from tween decks, ~~storm valves~~ ^{wood plugs} not fitted
2 Sanitary discharges amidships and one forward discharging through sides between Freeboard & Superstructure decks.

Particulars of Side Scuttles:

None below Freeboard Deck.
In Fore & Poop, space of substantial construction and fitted with hinged deadlights

Particulars of Guard Rails:—

On sides and front of Forecastle 3'-6" high, 3 rails, 4'-6" apart.

Portable Rails and stanchions fitted abreast No. 2 & 4 Hatchways on Shelter Deck. 3 rails, 18'9" in length with stanchions 4'-6" apart.

Particulars of Gangways, Lifelines, etc.:—

NONE.

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 ...	Steel Bulwark fitted from 2' cle front to after end of vessel 3'-8" high except for a length of 18'9" abreast No. 2 and 4 Hatchways where open Rails are fitted, 3 Rails with portable stanchions 4'-6" apart					
Forward Well ...	3 Freeing ports P&S 2'-4" x 1'-4" 12" above deck with one Rail Fore and aft					

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:— see above.

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 ...	10' x 40	.30	5' x 2 1/2' x .25	30"	Brackets at Bottom only	1 on center line 4'-6" x 36"	24"	✓
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead ...	10' x 40	.30	4 1/2' x 2 1/2' x .30	30"	None	1 P 1'-5" x 1'-6" 4'-6" x 36"	24"	✓
Bridge, Forward Bulkhead ...								
Forecastle Bulkhead ...	10' x 40	.26	4' x 2 1/2' x .35	24 1/2 30	None	1 P 5'-0" x 2'-0" 2 5' SEE SKETCH	15"	✓
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Superstructure Decks ...	16' x 34	.30	4' x 3' x .35	24	None	1 P 5'-0" x 27" 1 5'-0" x 16" ENG R	16" 18"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	18' x 45	.35	4' x 3' x .35	31	"	1 P 2'-0" x 2'-0" 15 "	18"	2'-10"
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead ...	3" Weather Boards in Rivetted Channels full height
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	3" Weather Boards in Rivetted Channels full height also two Midship B'heads
Bridge, Forward Bulkhead ...	✓
Forecastle Bulkhead ...	See Sketch
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Superstructure Deck ...	Steel hinged doors manipulated both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	Steel hinged doors manipulated from one side
Deckhouses on Flush Deck Ships ...	✓

after Bhd

4'3" TONNAGE OPENING

6'-6"

8"

3rd Bhd

Freeing Port

Scupper p/s

Scupper p/s

Scupper p/s

Scupper p/s

Scupper

FORECASTLE

11'-5"

3'-0"

11'-5"

6'-6"

3" Sheathing

Breadth of Deck at Centre of opening 42'8"

Tonnage opening 4'3" x 16'8"

No 5

No 4

No 3

No 2

No 1

Superstructure Deck

Freeboard Deck

Wood Doors in Alleys

5'-0" x 2'-0", 15"

Steel Hinged Doors

2 Starboard 5'-0" x 2'-0"

1 Port " "

365.50

366.50

342.00

343

Superstructure Deck Hatches

Coal Shovel Hatch on top of E.R.B. casing 12'-0" x 4'-3" Coaming 18" x 40, 3 covers 7' x 8 on 3' rest bars, cleats 18", 2 Jarks
Luggage Hatch 4'-5" x 16'-8", Coaming 12' x 3' x 75 lbs. 3 covers 7' x 8 on 3' rest bars, cleats 18", 2 Jarks
Hatch 1' x 16' 8" x 16' 8"

Hatch 6 After Peak Strs 3'5" x 6'3", Coaming 30' x 40', 3' Crown 3' x 4' on 3" rest bar, secured by battening to

... ..

Freeboard Deck Hatch

Bunker Hatch each side 15'3" x 5'0", Coaming angle round 3' x 3' x .35, Bearing surface 3', ~~No covers or Tarps fitted.~~

4' 0" x 3' 10"

20 Drimming Hatch 1'10" x 2'4", Coaming angle 4 x 3 1/2 x .375, Cover 3" F & A, Bearing surface 3", ~~No~~ covers or tarp fitted.

The following information obtained on board.

<u>Draft.</u>	<u>Deadweight</u>
14' 9 $\frac{1}{2}$ "	4500
18' 10 $\frac{1}{2}$ "	5000
20' 0"	5500
21' 2"	6000
22' 3 $\frac{1}{2}$ "	6500

Names of sister ships.....✓

Owners Alexander Shipping Co. Ltd. (Carrer Alexander Co. Mgrs)

Fee £ 11 : 18 . 0

Received by me