

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **2474**
(For London Office only.)

No 101062

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having *Shelter deck with Raised Forecastle.*

(Type of Superstructures.)

Port of Survey *Birkenhead*

Date of Survey *12 Sept Subsequently, 1912.*

Name of Surveyor *H. B. Murray*

Particulars of Classification *+100A1 Shelter deck with freeboard fitted for oil fuel*
S.S. Mdb. No 2.28. F.P. above 150 F.

Ship's Name *LALANDE* *Dec 11/10* Nationality and Port of Registry *British Liverpool* Official Number *143665* Gross Tonnage *4453* Date of Build *1920-9*

Moulded Dimensions: Length *442'-0"* Breadth *55'-0"* Depth *38'-0" upper deck*
38'-0" shelter deck

Moulded displacement at moulded draught = 85 per cent. of moulded depth *17466* tons

Coefficient of fineness for use with Tables *.779*

Depth for Freeboard (D)

Moulded depth ... *upper deck 38'-0"* *shelter deck 38'-0"*

Stringer plate ... *60'-05"*

Sheathing on exposed deck

$T \left(\frac{L-S}{L} \right) = .21 \times \frac{46}{396.38} = .02$

Depth for Freeboard (D) = *38.07*

Depth correction

(a) Where D is greater than Table depth (D-Table depth) R = *(38.07 - 29.47) 3 = +25.80*

(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) *55'-0"*

Standard Round of Beam = $\frac{B \times 12}{50} = 13.20$

Ship's Round of Beam = *14"*

Difference *.80*

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.80}{4} \times .8968 = .18$

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 ...	✓					
overhang						
Bridge enclosed ...	<i>103.49'</i>		<i>8'-0"</i>			
open at ship's edge						
" overhang aft ...						
" overhang forward						
F'cle enclosed ...	<i>45.62'</i>	<i>45.62'</i>	<i>7'-6"</i>	✓	<i>45.62'</i>	
" overhang ...						
Trunk aft ...						
" forward ...						
tonnage opening aft ...						
" forward						
Total ...	<i>45.62</i>	<i>45.62</i>			<i>45.62</i>	

Standard Height of Superstructure *7.50*

" " R.Q.D. ✓

Deduction for complete superstructure *42.00*

Percentage covered $\frac{S}{L} = 10.32\%$

" " $\frac{S_1}{L} = 10.32\%$

" " $\frac{E}{L} = 10.32\%$

Percentage from Table, Line A. *5.16%*

(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) *no bridge*

Deduction = *42.00* × .0516 = *-2.17*

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>54.20</i>	1		<i>54.20</i>	<i>59.25</i>	<i>60.00</i>	<i>54.20</i>	1	<i>54.20</i>	✓	✓
L from A.P. ...	<i>24.12</i>	4		<i>96.48</i>	<i>26</i>	<i>27.65</i>	<i>24.12</i>	4	<i>96.48</i>	✓	✓
L " ...	<i>5.96</i>	2		<i>11.92</i>	<i>8</i>	<i>6.91</i>	<i>5.96</i>	2	<i>11.92</i>	✓	✓
amidships ...	✓	4		✓	✓	✓	✓	4	✓	✓	✓
L from F.P. ...	<i>11.92</i>	2		<i>23.84</i>	<i>19</i>	<i>12.05</i>	<i>12.05</i>	2	<i>24.10</i>	✓	✓
L " ...	<i>48.23</i>	4		<i>192.92</i>	<i>50</i>	<i>48.19</i>	<i>48.19</i>	4	<i>192.76</i>	✓	✓
F.P. ...	<i>108.40</i>	1		<i>108.40</i>	<i>112</i>	<i>108.00</i>	<i>108.00</i>	1	<i>108.00</i>	✓	✓
Total ...				<i>487.76</i>					<i>487.46</i>	✓	✓

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{.30}{18} \times (.75 - .0516) = +.01$

If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.779 + .68}{1.36} = \frac{1.459}{1.36}$	<i>84.62</i> <i>90.78</i>
Depth to Freeboard Deck = <i>38.05</i>	Δ =	Depth Correction ...	<i>25.80</i>
Summer freeboard = <i>9.50</i>	Tons per inch immersion at summer load water line	Deduction for superstructures ...	<i>2.17</i>
Moulded draught (d) = <i>28.55</i>	T =	Sheer correction ...	<i>.01</i>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>7.14</i> = <i>7¼</i>	Deduction = $\frac{\Delta}{40 T}$ inches =	Round of Beam correction ...	<i>.18</i>
Addition for Winter North Atlantic Freeboard (if required) =		Correction for Thickness of Deck amidships ...	<i>.24</i>
		Other corrections, scantlings, etc. ...	✓
		<i>25.81</i> <i>2.59</i> <i>+ 23.22</i>	
		Summer Freeboard = <i>114.00</i>	

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

Tropical Fresh Water Line above Centre of Disc ...		Tropical Fresh Water Freeboard ...	
Fresh Water Line " " ...		Fresh Water " " ...	
Tropical Line " " ...		Tropical " " ...	
Winter Line below " " ...	<i>7¼</i>	Winter " " ...	<i>10-2020</i>
Winter North Atlantic Line " " ...	✓	Winter North Atlantic " " ...	✓

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Description of Hatchway		No. 1.	No. 2	No. 3	No. 4	No. 5	No. 6	
Dimensions of Hatchway		28'-8 1/2" x 18'-0"	30'-11" x 18'-0"	31'-10" x 18'-0"	11'-0 1/2" x 18'-0"	28'-8 1/2" x 18'-0"	26'-6" x 18'-0"	
COAMINGS	Height above Deck	30" ✓	30" ✓	30" ✓	30" ✓	30" ✓	30" ✓	
	Thickness	.60	.60	.54	.54	.60	.60	
	Stiffeners	4x4	4x4	4x4	4x4	4x4	4x4	
	Brackets, Stays	4x3 1/2 x 58A	4x3 1/2 x 58A	4x3 1/2 x 58A	4x3 1/2 x 58A	4x3 1/2 x 58A	4x3 1/2 x 58A	
HATCH BEAMS	Number	5	6	1	5	5	5	
	Spacing	4'-10"	4'-6"	4'-5"	5'-6"	4'-10"	4'-6"	
	Scantling and Sketch	plate 17' x 36" top angles 3 1/2 x 3 1/2 x .44 Bottom angles 6x6 x .64	plate 16' x 36" top L's 3 1/2 x 3 1/2 x .44 Bottom L's 6x6 x .64	plate 16' x 36" top L's 3 1/2 x 3 1/2 x .44 Bottom L's 6x6 x .64	plate 17' x 36" top L's 3 1/2 x 3 1/2 x .44 Bottom L's 6x6 x .64	plate 17' x 36" top angles 3 1/2 x 3 1/2 x .44 Bottom L's 6x6 x .64	plate 16' x 36" top angles 3 1/2 x 3 1/2 x .44 Bottom L's 6x6 x .64	plate 16' x 36" top angles 3 1/2 x 3 1/2 x .44 Bottom L's 6x6 x .64
	Bearing Surface	3/2" ✓	3/2" ✓	3/2" ✓	3/2" ✓	3/2" ✓	3/2" ✓	
FORE AND AFTERS	Number	✓	✓	✓	✓	✓	✓	
	Spacing							
	Unsupported Lengths							
	Scantling* and Sketch							
HATCH COVERS	Bearing Surface							
	Material	N.P. ✓	N.P. ✓	N.P. ✓	N.P. ✓	N.P. ✓	N.P. ✓	
	Thickness	3" ✓	3" ✓	3" ✓	3" ✓	3" ✓	3" ✓	
	How fitted	F+A ✓	F+A ✓	F+A ✓	F+A ✓	F+A ✓	F+A ✓	
Spacing of Cleats	Bearing Surface	3" ✓	3" ✓	3" ✓	3" ✓	3" ✓	3" ✓	
		22" x 24" ✓	22" x 24" ✓	22" x 18" ✓	23" ✓	24" ✓	22" x 24" ✓	
Number of Tarpaulins		3 ✓	3 ✓	3 ✓	3 ✓	3 ✓	3 ✓	

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

Particulars of fiddley, funnel and ventilator coamings:—

of fiddle, funnel and ventilator coverings:—
 Fiddle, funnel & ventilator coverings in efficient condition. ✓
 Fiddle gratings fitted with steel hinged covers. ✓
 ER Skylights strongly constructed of steel. ✓

Particulars of Flush Bunker Scuttles:—

4 (2P + 2S) on Boat Deck. 22" dia. Cast covers, bayonet fitting, no chains. ✓

Particulars of Companionways :—

Two on after deck to cross account. Steel casing. Wood hinged doors manipulated from both sides 5'-3" x 2'-1" sill 12". ✓

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

wood/plugs + canvas cores for all vents.

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

wood plugs for all air pipes except to
OF Tanks. These fitted with gauge wire

Particulars of Gangway Cargo and Coaling Ports:—

2. (P & S) in shelter tween decks abreast the fidley 6'-0" x 4'-4". Sill 10".
Steel hinged doors in halves, efficiently secured. ✓

Particulars of Scuppers and Sanitary Discharge Pipes

Sanitary discharge pipes fitted with Storm Valves at the ship's sides.
Scuppers, $3\frac{1}{2}$ " open pipes through ship's side about 18" below shelter deck.

Particulars of Side Scuttles:—

titles:—
Side scuttles fitted with hinged deadlights. ✓

Particulars of Guard Rails :—

on Forecastle deck.	3' 6" high stanchions spaced 4'-0".	3 rails	✓
on Fore deck	3' 6" high stanchions spaced 4'-6"	4 rails.	✓
on after deck	3' 6" high stanchions spaced 4'-9"	4 rails.	✓

Particulars of Gangways, Lifelines, etc. :—

Suitable provision is made for rigging lifelines which ^{are fitted} are available for use in any part of the ship which might have to be used 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	<i>Open Rails</i>					
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.

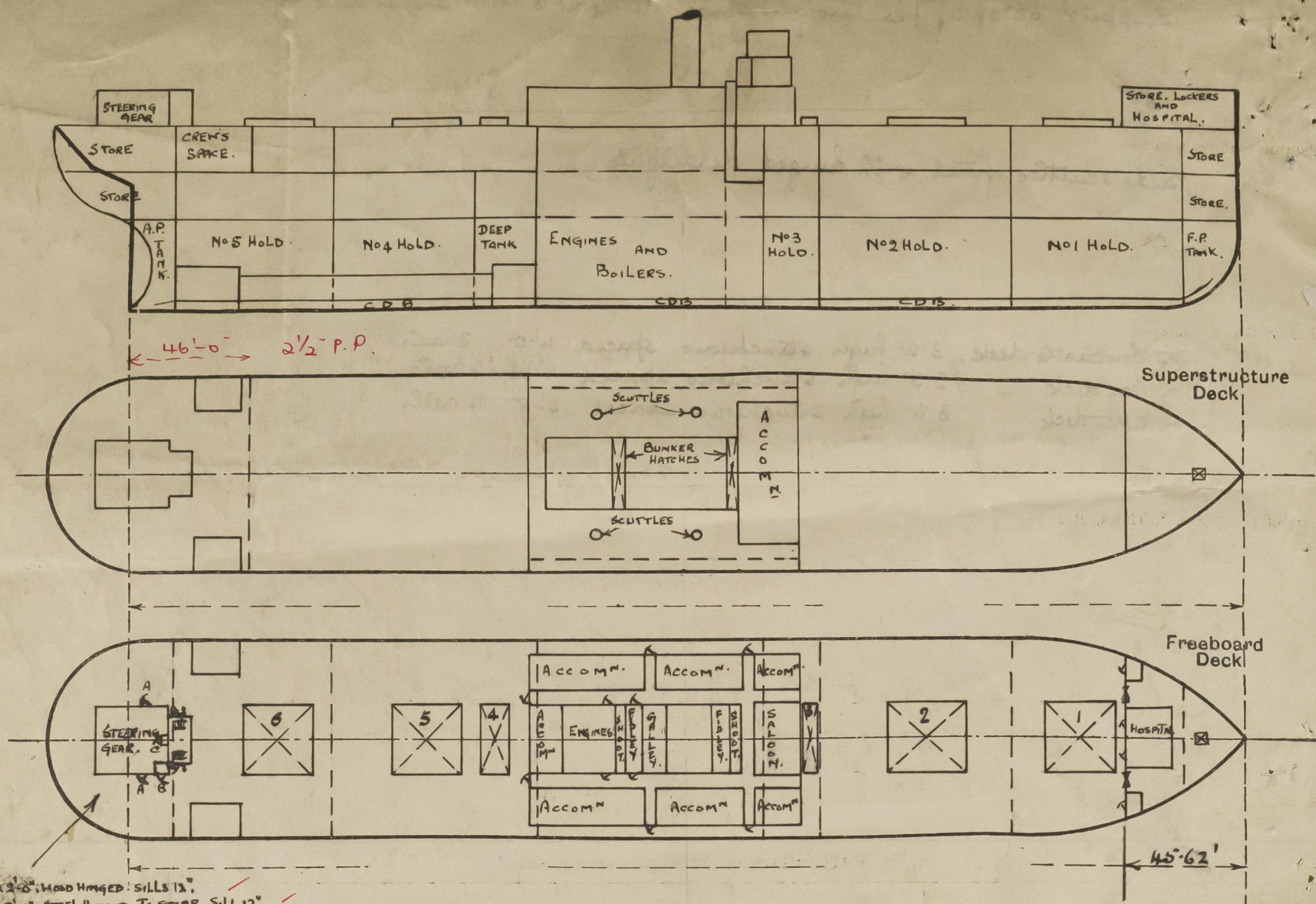
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	✓							
House forward Bridge, Forward Bulkhead	7/16" ✓	5/16" ✓	wood cased			None	✓	8'-0"
Forecastle Bulkhead	3/8" ✓	1/4" ✓	3 x 3 x 3/8 Ls	3'-6" ✓	None	2 at 6'-10 1/2" x 3'-6" 4 at 5'-0" x 2'-0"	4" 15" ✓	4'-6" ✓
Trunk, Aft	✓							
Trunk, Forward	✓							
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	Vert. plating	3/8"	5" flanges on plate	2'-2"	asternate brackets at top	4'-11" x 2'-2"	14"	8'-0"
Deckhouses on Flush Deck Ships ...	5/16	1/4	4 x 4 x 3/8 Ls	2'-9"	Bbs at top	3'-3" x 2'-1" 5'-1 1/2" x 2'-0"	14 12	4'-6"

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	✓	
Forecastle Bulkhead	✓	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	Wood & steel hinged doors manipulated from both sides & 3' stern boards in riveted channels full height.
Exposed Machinery Casings on Superstructure Decks	✓	
Machinery Casings within Superstructure not fitted with Class I Closing Appliances		Steel hinged doors manipulated from both sides.
Deckhouses on Flush Deck Ships		Strong steel & wood hinged doors manipulated from both sides.

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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:—



DOORS A. 5'-11 1/2" x 2'-8" HINGED: SILL 13".
B. 5'-5" x 2'-0" STEEL HINGED: TO STORE. SILL 12".
C. 5'-3" x 2'-0" STEEL HINGED TUNNEL ESCAPE. SILL 15"

Forward Bunker Hatch on Boat Deck. 4'-1" x 18'-0". Coaming 12" x 3/8". W.P. covers 3". bearing 3". Cleats spaced 24"-30". 3 tarpaulins.
Aft Bunker Hatch on Boat Deck. 4'-6" x 18'-0". Coaming 12" x 3/8". Covers 3" W.P. bearing 3". Cleats spaced 24"-30". 3 tarpaulins.
Small Hatch on Raised Forecastle deck. 2'-10 1/2" x 2'-10 1/2". Coaming 5" x 3/8". 3" W.P. covers bearing 2". Cleats spaced 22". 2 tarpaulins to F.P. Stores.
Small Hatch in Raised Forecastle on Shelter deck. Wood trunk from above. 3'-5" x 3'-5". 3" angle coaming bearing for wood covers 3". No cleats or tarpaulins.
Leading to Fore Peak Store. 3" wood covers.

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

Vessel in dry dock for part S.S. and afloat.
Sheers measured afloat.

Builder's name and yard number

D.W. Henderson & Co. Ltd. No 503

Names of sister ships

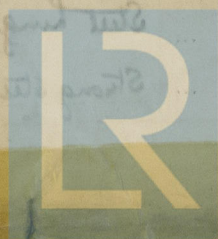
Owners

Lampart & Holt Ltd.

Fee £

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