

Rpt. C.11.

# Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

Index No. **30336**  
(For London Office only.)

11 AUG 1932

Computation of Freeboard for *motor ship* **Steamer, Sailing Ship, Tanker**  
having *Complete Superstructure Deck without Tonnage Opening.*  
*Forecastle on Superstructure Deck.*  
(Type of Superstructures.)

Port of Survey *Gothenburg*  
Date of Survey *9<sup>th</sup> August 1932*  
Name of Surveyor *H. J. J. J. J.*  
Particulars of Classification *100 A. I.*  
*Shelter d.k. with freeb.*  
*S.S. Gt. No 2-30.*

Ship's Name *"LAPONIA"*  
Nationality and Port of Registry *Swedish. Stockholm.*  
Official Number *6720.*  
Gross Tonnage *5630.*  
Date of Build *1922-3.*

Moulded Dimensions: Length *385'* Breadth *53.42'* Depth *34.06'*  
Moulded displacement at moulded draught = 85 per cent. of moulded depth *13530* tons  
Coefficient of fineness for use with Tables *0.795.*

Depth for Freeboard (D)  
Moulded depth ... *34.06'*  
Stringer plate ... *0.05*  
Sheathing on exposed deck  
 $T \left( \frac{L-S}{L} \right) =$   
Depth for Freeboard (D) = *34.11'*

Depth correction  
(a) Where D is greater than Table depth  
(D-Table depth) R = *(34.11-25.67) 2.962 = 25.00*  
(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) *53.42'*  
Standard Round of Beam =  $\frac{B \times 12}{50} =$  *12.82*  
Ship's Round of Beam = *13"*  
Difference  
Restricted to  
Correction =  $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) =$  *13(1) = 0.04.*

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
" overhang ...	✓				
R.Q.D. enclosed ...	✓				
" overhang ...	✓				
Bridge enclosed...	✓				
" overhang aft ...	✓				
" overhang forward	✓				
" Enclosed open ...	<i>38.5'</i>	<i>38.50</i>	<i>7.5'</i>		<i>38.50</i>
" overhang ...	<i>1.5'</i>	<i>.75</i>			<i>.75</i>
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" forward	✓				
Total ...	<i>40.00</i>	<i>39.25</i>			<i>39.25</i>

Standard Height of Superstructure *7.35*  
" " R.Q.D.  
Deduction for complete superstructure *41.00*  
Percentage covered  $\frac{S}{L} =$  *10.29.*  
" "  $\frac{S_1}{L} =$  *10.20*  
" "  $\frac{E}{L} =$  *10.20*  
Percentage from Table, Line A. *5.10*  
(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 = *-2.09.*

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>48.50</i>	1		<i>48.50</i>	<i>49.5"</i>	<i>44.0</i>	1		<i>44.00</i>
$\frac{1}{2}$ L from A.P. ...	<i>21.58</i>	4		<i>86.32</i>	<i>14.44"</i>	<i>15.50</i>	4		<i>62.00</i>
$\frac{3}{8}$ L " ...	<i>5.33</i>	2		<i>10.66</i>	<i>1.97"</i>	<i>2.00</i>	2		<i>4.00</i>
Amidships ...	✓	4		✓	✓	✓	4		✓
$\frac{3}{8}$ L from F.P. ...	<i>10.67</i>	2		<i>21.34</i>	<i>12.75"</i>	<i>13.00</i>	2		<i>25.94</i>
$\frac{1}{2}$ L " ...	<i>43.16</i>	4		<i>172.64</i>	<i>45.94"</i>	<i>44.24</i>	4		<i>176.92</i>
F.P. ...	<i>97.00</i>	1		<i>97.00</i>	<i>107.69"</i>	<i>108.00</i>	1		<i>107.86</i>
Total ...				<i>436.46</i>					<i>420.72</i>

Mean actual sheer aft = *48.50*  
Mean standard sheer aft = *44.0*  
Mean actual sheer forward = *44.24*  
Mean standard sheer forward = *43.16*  
Length of enclosed superstructure forward of amidships = *107.86*  
" " aft of " =

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$  *15.74 (75-.052) = +.61.*

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.  
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *34.11*  
Summer freeboard = *9.00*  
Moulded draught (d) = *26.11*

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = *6.53*  
Addition for Winter North Atlantic Freeboard (if required)=

Deduction for Fresh Water.

Displacement in salt water at summer load water line  
 $\Delta =$  *12,190*  
Tons per inch immersion at summer load water line  
 $T =$  *41.7*  
Deduction =  $\frac{\Delta}{40 T}$  inches = *7.31.*

TABULAR FREEBOARD corrected for Flush Deck (if required)  
Correction for coefficient

	+	-
Depth Correction ...	<i>25.00</i>	
Deduction for superstructures ...		<i>2.09</i>
Sheer correction ...	<i>.61</i>	
Round of Beam correction...		<i>.04</i>
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc. ...		
	<i>25.61</i>	<i>2.13</i>

Summer Freeboard = *96.03*

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

Tropical Fresh Water Line above Centre of Disc ...	<i>13.84</i>	<i>352"</i>	Tropical Fresh Water Freeboard ...	<i>2.087"</i>
Fresh Water Line " " ...	<i>7.31</i>	<i>186"</i>	Fresh Water " " ...	<i>2.253"</i>
Tropical Line " " ...	<i>6.53</i>	<i>166"</i>	Tropical " " ...	<i>2.273"</i>
Winter Line below " " ...	<i>6.53</i>	<i>166"</i>	Winter " " ...	<i>2.605"</i>
Winter North Atlantic Line " " ...			Winter North Atlantic " " ...	

5m. 3.2.

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# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	N <sup>o</sup> 1, 5	N <sup>o</sup> 2, 3, 4					
Dimensions of Hatchway	...	...	25'6" x 23'6"	25'6" x 23'6"					
COAMINGS	Height above Deck	...	32"						
	Thickness	...	5/8"						
	Stiffeners	...	5" x 7" x 3" x 46"						
	Brackets, Stays	...	1 off 3	1 off 2					
HATCH BEAMS	Number	...	5	5					
	Spacing	...	4'3"	4'3"					
	Scantling and Sketch	...							
	Angles	...	5" x 4" x 50"	6" x 4" x 50"					
FORE AND AFTERS	Web	...	16" x 40"	19" x 40"					
	Bearing Surface	...	3"	3"					
	Number	...							
	Spacing	...							
HATCH COVERS	Material	...	Wood						
	Thickness	...	2 1/2"						
	How fitted	...	F. & A.						
	Bearing Surface	...	2 1/2"						
Spacing of Cleats	...	...	23" to 24"						
Number of Tarpaulins	...	...	3						

\*Are wood fore and afters steel shod at all bearing surfaces? *None fitted.*  
 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:—

*Motorship - No fiddley openings.*

*Vents to motorspace & funnel on top of casing in good condition.*

Particulars of Flush Bunker Scuttles:— *None fitted.*

Particulars of Companionways:— *B. H.*

*To starboard - Steel comp. 6'5" x 3'9" x 7'6" under floor, steel door 5'4 1/2" x 3'1" cap. of being manip. from both sides, sill 12".*

*To port - Steel house with steel door 5'2" x 2'2 1/2" cap. of being manip. from both sides, sill 14".*

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

*Forw'd deckhouse - 3 off 12" diam 36" x 36" coam.*

*All - 4 - 12" - 36" x 36" - } Steel caps & canvas covers supplied.  
 2 - 11" - 33" x 33" x 34" coam.*

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

*Opening of air pipes above steel deck - 31". Canvas covers supplied.*

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

Particulars of Scuppers and Sanitary Discharge Pipes:—

*Scuppers from weather deck 12" 3" steel.*

*Sanitary Discharge Pipes are fitted with N. R. Valves.*

Particulars of Side Scuttles:—

*Side lights through ship's sides are fitted with perm. attached, hinged deadlights.*

*hinged deadlights and all of them in position as in forward.*

Particulars of Guard Rails:—

*Open rails with three horizontal rods & stanchions 3'6 1/2" high, spaced at 4'5" apart are fitted, except in way of deckhouses where bulwark 3'6" high is fitted.*

Particulars of Gangways, Lifelines, etc.:— *None fitted.*

*Nothing*

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:—  
 (F. and A. position and height above deck edge) } After 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	✓							
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Deck	✓							
Exposed Machinery Casings on Superstructure Decks	✓							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships	✓							

*Casing completely surrounded by steel deckhouse.*

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	✓
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Flush Deck Ships	✓

*Open*



A hand-drawn plan view of a ship's hull, oriented horizontally with the bow to the right. The drawing is on aged, yellowed paper with some stains and a vertical crease down the center. The hull is divided into several sections by dashed lines representing the centerline and other structural boundaries. At the bow (right), there is a small square labeled 'Comp'. Moving left, there are three rectangular compartments labeled 'Nº 1', 'Nº 2', and 'Nº 3' from right to left. Between 'Nº 2' and 'Nº 3' is a larger compartment labeled 'Acc.' (Access) and 'Motor'. To the left of this is another 'Acc.' compartment, and further left is a 'House' compartment. The hull tapers to a point at the bow. Above the hull, there are several rectangular shapes representing superstructure or deck equipment. The text 'Crew berthed. aft.' is written near the stern (left). The text 'Superstructure Deck' is written above the bow section, and 'Freeboard Deck' is written below the bow section. A dimension line indicates a length of '40'-0"' from the stern to the bow. The drawing is a technical sketch, likely for a model or a small-scale vessel.

This vessel has cruiser stern.

This vessel has been surveyed afloat, but will be drydocked before leaving this port.

Received by me