

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

23 MAY 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Newcastle-on-Tyne</u>	
having <u>Poop, Bridge &amp; Forecastle</u>					Date of Survey <u>20th May 1932</u>	
(Type of Superstructures.)					Name of Surveyor <u>Alex E Stevenson</u>	
Ship's Name <u>LAURITZ</u> <u>EX BEDLINGTON</u>		Nationality and Port of Registry <u>Finnish</u> <u>Helsingfors</u>	Official Number <u>1600</u>	Gross Tonnage <u>11 mo</u>	Particulars of Classification <u>+100A1</u>	
Moulded Dimensions: Length <u>249.75'</u> Breadth <u>39.5'</u> Depth <u>19.86'</u>						
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>3570</u> tons						
Coefficient of fineness for use with Tables <u>.750</u>						
Depth for Freeboard (D)			Depth correction		Round of Beam correction	
Moulded depth ... .. <u>19.86'</u>			(a) Where D is greater than Table depth (D-Table depth) R = <u>(19.90 - 16.65) 1.921 = + 6.24"</u>		Moulded Breadth (B) <u>39.5'</u>	
Ringer plate ... .. <u>.04</u>			(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>9.48"</u>	
Weathering on exposed deck $T \left( \frac{L-S}{L} \right) =$			If restricted by superstructures		Ship's Round of Beam = <u>11"</u>	
Depth for Freeboard (D) = <u>19.90'</u>					Difference <u>1.52"</u>	
					Restricted to	
					Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{1.52}{4} \times 6106 = -23"$	

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	<u>16.75</u>	<u>16.75</u>	<u>7-11"</u>	<u>/</u>	<u>16.75</u>
" overhang ... ..	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
R.Q.D. enclosed ... ..	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
" overhang ... ..	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Bridge enclosed ... ..	<u>56.0</u>	<u>56.00</u>	<u>7-11"</u>	<u>/</u>	<u>56.00</u>
" overhang aft ... ..	<u>2.0</u>	<u>1.50</u>	<u>/</u>	<u>/</u>	<u>1.50</u>
" overhang forward ... ..	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Forecastle enclosed ... ..	<u>23.0</u>	<u>23.00</u>	<u>7-11"</u>	<u>/</u>	<u>23.00</u>
" overhang ... ..	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Trunk aft ... ..	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
" forward ... ..	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Tonnage opening aft ... ..	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
" " forward ... ..	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total ... ..	<u>97.75</u>	<u>97.25</u>	<u>-</u>	<u>-</u>	<u>97.25</u>

Standard Height of Superstructure 6.00" " R.Q.D. /Deduction for complete superstructure 30.98Percentage covered  $\frac{S}{L} =$  39.15%" "  $\frac{S_1}{L} =$  38.94%" "  $\frac{E}{L} =$  38.94%

Percentage from Table, Line A.

(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 = 30.98 x .266 = - 8.24"

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
P. ... ..	<u>34.98</u>	<u>1</u>	<u>1</u>	<u>34.98</u>	<u>40.5</u>	<u>40.50</u>	<u>1</u>	<u>1</u>	<u>40.50</u>
from A.P. ... ..	<u>15.57</u>	<u>4</u>	<u>4</u>	<u>62.28</u>	<u>17.2</u>	<u>17.38</u>	<u>4</u>	<u>4</u>	<u>69.52</u>
" " ... ..	<u>3.85</u>	<u>2</u>	<u>2</u>	<u>7.70</u>	<u>4.2</u>	<u>4.34</u>	<u>2</u>	<u>2</u>	<u>8.68</u>
amidships ... ..	<u>-</u>	<u>4</u>	<u>4</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4</u>	<u>4</u>	<u>-</u>
from F.P. ... ..	<u>7.70</u>	<u>2</u>	<u>2</u>	<u>15.40</u>	<u>8</u>	<u>8.09</u>	<u>2</u>	<u>2</u>	<u>16.18</u>
" " ... ..	<u>31.13</u>	<u>4</u>	<u>4</u>	<u>124.52</u>	<u>32</u>	<u>32.39</u>	<u>4</u>	<u>4</u>	<u>129.56</u>
P. ... ..	<u>69.96</u>	<u>1</u>	<u>1</u>	<u>69.96</u>	<u>72</u>	<u>72.00</u>	<u>1</u>	<u>1</u>	<u>72.00</u>
Total ... ..	<u>314.84</u>	<u>-</u>	<u>-</u>	<u>314.84</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>336.44</u>

Mean actual sheer aft = Excess

Mean standard sheer aft

Mean actual sheer forward = Excess

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = 111" " aft of " = 114Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{21.60}{18} \left( .75 - \frac{1957}{2 \times 249.75} \right) = - .67"$ 

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 = 19.90  
Summer freeboard = 2.58  
Moulded draught (d) = 17.32Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 4.33  
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ 

Tons per inch immersion at summer load water line

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ... ..	<u>6.24</u>	<u>-</u>
Deduction for superstructures ... ..	<u>-</u>	<u>8.24</u>
Sheer correction ... ..	<u>-</u>	<u>.67</u>
Round of Beam correction ... ..	<u>-</u>	<u>.23</u>
Correction for Thickness of Deck amidships ... ..	<u>-</u>	<u>-</u>
Other corrections, scantlings, etc. ... ..	<u>-</u>	<u>-</u>
	<u>6.24</u>	<u>9.14</u>

Summer Freeboard = 31.01

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

Tropical Fresh Water Line above Centre of Disc ... ..  
Fresh Water Line " " ... ..  
Tropical Line " " ... ..  
Winter Line below " " ... ..  
Winter North Atlantic Line " " ... ..Tropical Fresh Water Freeboard ... ..  
Fresh Water " " ... ..  
Tropical " " ... ..  
Winter " " ... ..  
Winter North Atlantic " " ... ..



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	N <sup>o</sup> 1	N <sup>o</sup> 2	N <sup>o</sup> 3	N <sup>o</sup> 4	Bunker Hatchways on Bridge Deck	Bunker Hatchways on Upper Deck	Bunker Hatchways on Casings	Escape Hatchways on Upper Deck	Store Hatchways on Upper Deck	
Dimensions of Hatchway	28-0" x 25-0"	26-0" x 25-0"	28-0" x 25-0"	26-0" x 25-0"	11-6" x 2-10"	5-6" x 3-0"	8-0" x 14-0"	3-8" x 2-0"	3-0" x 3-0"	
COAMINGS										
Height above Deck	30"	30"	30"	30"	18"	9"	16"/10"	18"	9"	
Thickness Sides	44"	44"	44"	44"	40"	9" x 3" B.A.	30"	32"	9" x 3" B.A.	
Stiffeners	7 x 3 B.A.	7 x 3 B.A.	7 x 3 B.A.	7 x 3 B.A.	40"		30"	32"		
Brackets, Stays	2 off 2 1/2 dia	2 off 2 1/2 dia	2 off 2 1/2 dia	2 off 2 1/2 dia						
HATCH BEAMS										
Number	5	5	5	5	none	none	none	none	none	
Spacing	4'-3"	4'-4"	4'-5"	4'-4"						
Scantling and Sketch	20 1/4" x 40"	20 1/4" x 40"	20 1/4" x 40"	20 1/4" x 40"						
Bearing Surface	32"									
FORE AND AFTERS										
Number	none	none	none	none	none	none	none	none	none	
Spacing										
Unsupported Lengths										
Scantling and Sketch										
Bearing Surface										
HATCH COVERS										
Material	wp.	wp.	wp.	wp.	wp.	wp.	wp.	steel	wp.	
Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	36"	2 1/2"	
How fitted	2 x 2	2 x 2	2 x 2	2 x 2	2 x 2	2 x 2	2 x 2	2 x 2	2 x 2	
Bearing Surface	5' x 5 1/2"	5' x 5 1/2"	5' x 5 1/2"	5' x 5 1/2"	5' x 5 1/2"	5' x 5 1/2"	5' x 5 1/2"	5' x 5 1/2"	5' x 5 1/2"	
Spacing of Cleats	25"	24"	23"	23"	24"	23 1/2"	27"	27"	27"	
Number of Tarpaulins	2	2	2	2	2	2	2	2	2	
<p>*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/></p> <p>Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/></p> <p>Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/></p>										

Particulars of fiddle, funnel and ventilator coamings:-

Stokehold gratings covered by strong steel hinged covers.  
Funnel & fiddle ventilators in efficient condition.  
Engine skylight of steel, strongly constructed.

Particulars of Flush Bunker Scuttles:-

Particulars of Companionways:-

Two on Bridge deck (alongside coal hatch), to accommodation in bridge.  
6-0" x 3-6" x 6-8" high (steel).  
Hinged wood panel doors (1 1/2" frame, 3/4" panel) 3-10" x 1-10", sill 13", operated both sides.

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

File deck 1 off 6" dia. coaming 12" x 25" led to fore peak.  
Upper deck fore well 1 - 18" 36" x 36" hold.  
aft well 1 - 16" 36" x 36"  
1 - 18" 36" x 36"  
Ventilators are constructed in accordance with rules.  
Coamings closed with wood plugs & canvas covers.

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

Upper deck in fore well 1. ci gooseneck 4" dia x 29" to spousing from double bottom.  
Bridge deck 6" 3" x 23"  
Upper deck in aft well 2. 3" x 22"  
1. 4" x 18"  
Efficient closing appliances provided.

Particulars of Gangway Cargo and Coaling Ports:-

Deck	Port	Material	Dimensions	Remarks
Top of Deck	Starboard	Wood	12" x 25"	12" x 25" led to fore peak.
Top of Deck	Port	Wood	12" x 25"	12" x 25" led to fore peak.
Top of Deck	Starboard	Wood	12" x 25"	12" x 25" led to fore peak.
Top of Deck	Port	Wood	12" x 25"	12" x 25" led to fore peak.
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Top of Deck	Port	Wood	12" x 25"	12" x 25" led to fore peak.
Top of Deck	Starboard	Wood	12" x 25"	12" x 25" led to fore peak.
Top of Deck	Port	Wood	12" x 25"	12" x 25" led to fore peak.

Particulars of Scuppers and Sanitary Discharge Pipes:-

From Poop space. WC discharge P.T. discharging below upper deck with storm valve at ship's side.  
Bridge space. Pot. 2 was discharging below upper deck with storm valve at ship's side.  
Scupper running into bulk discharge (2 off) with storm valve at ship's side.  
Solid. Scupper discharging below upper deck with storm valve at ship's side.  
P.T. Scupper from bridge bunker space discharging into E.R. bilges.  
aft from lower deck (note tank overflowers through ports & side scuttles respectively) (not side) no valves.

Particulars of Side Scuttles:-

Side scuttles in poop & bridge, with hinged deadlights.

Particulars of Guard Rails:-

On freeboard deck in wells, steel bulwarks 3-4 1/2" high, efficiently constructed & supported.  
On bridge deck, steel bulwarks 3-6" high, for 20-0" at fore end, remainder guard rails 3-3" high with 2 rods & stanchions 4-6" apart.  
On Poop deck, guard rails 3-6" high, with two rods & stanchions 4-6" apart.  
File 3-3" 4-0"

Particulars of Gangways, Lifelines, etc.:-

none (even in poop).  
Suitable provision is made for rigging lifelines available for use in any part of the ship which might have to be used by the crew in the regular working thereof.

## 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	78-0"	3-4 1/2"	3-6" x 1-7"	3	14.94 sq	15.6 sq
Forward Well	74-0"	3-4 1/2"	3-6" x 1-7"	3	14.94 sq	14.8 sq
<p>State position of each freeing port ... After Well:- 13-3", 28-3" &amp; 61-3" from Bridge bulkhead. (F. and A. position and height above deck edge) Forward Well:- 11-5", 29-3" &amp; 50-0" from Bridge bulkhead } 15" above deck. State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:- Fitted with 2 horizontal rods. Additional area where sheer is less than standard.</p>						

## Particulars of Superstructures, Trunks, Casings, Deckhouses.

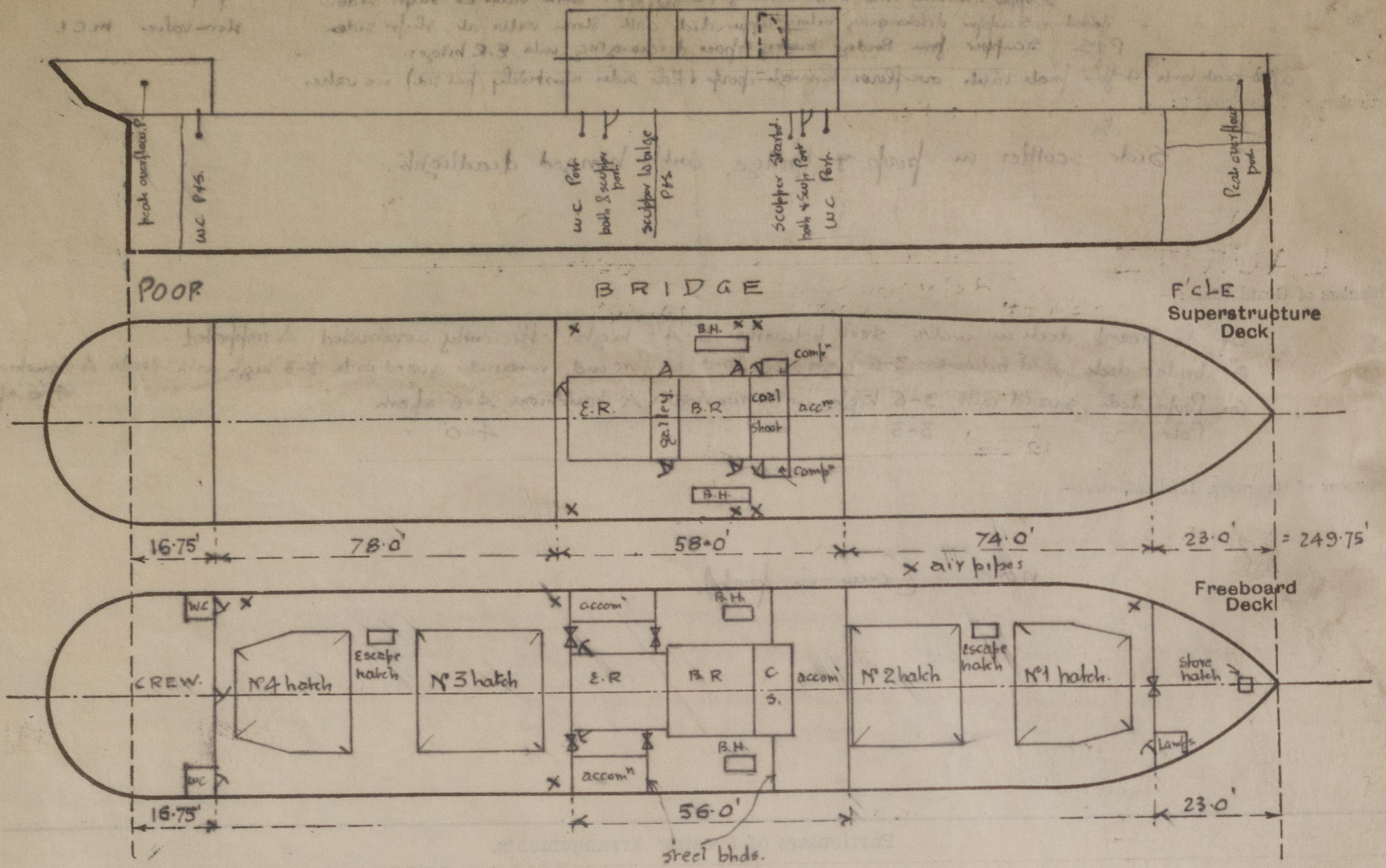
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	40"	36"	5 1/2" x 3" x 34"	29"	Plates top & bottom	5-6" x 2-0" (3)	18"	7-11"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	-	32"	4" x 3" x 30"	30"	Plates top & bottom	6-3" x 3-6" (2)	18"	7-11"
Bridge, Forward Bulkhead	40"	36"	not accessible					7-11"
Forecastle Bulkhead	-	26"	3" flange	36"		(5 ft) 5-5" x 2-0" (1) (6 ft) 5-7" x 3-0" (1)	18"	7-11"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks						BR 4-6" x 2-0" (2) ER 4-9" x 1-10" (1)	17"	6-6"
Exposed Machinery Casings on Superstructure Decks	36"	30"	4 x 3 x 30"	36"				
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	38"	30"				ER 5-6" x 2-0" (2)	18"	7-11"
Deckhouses on Flush Deck Ships								

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

Poop Bulkhead	1 1/2" solid hinged wood doors, secured both sides.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	Portable plates, secured by hook bolts through plates 10" apart.
Bridge, Forward Bulkhead	
Forecastle Bulkhead	10 side house hinged wood door, secured both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	16 centre 2 1/2" weather boards in full height nested channels.
Exposed Machinery Casings on Superstructure Decks	To Boiler Room 2 piece hinged steel doors, with efficient securing appliance.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	To Engine Room Hinged wood panelled door (1 1/2" frame, 3/4" panel) secured both sides.
Deckhouses on Flush Deck Ships	Hinged wood panelled doors (1 1/2" frame, 3/4" panel) secured both sides.



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:—

Vessel surveyed afloat.

No Timber assignment required

Builder's name and yard number

Barclay Curle & Co. Ltd. Glasgow.

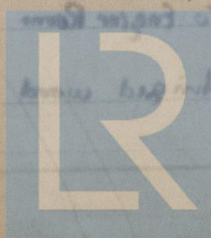
Names of sister ships

Owners

O/y. Erling Steamship Co. Ltd.

Fee £ 9 : 7 : 0 ✓

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