

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. _____
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having POOP BRIDGE and Forecastle

(Type of Superstructures.)

Ship's Name BENVORLICH	Nationality and Port of Registry British Leith	Official Number 142010	Gross Tonnage 5193	Date of Build 1919-8
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Moulded Dimensions: Length **399.5** Breadth **52** Depth **31**
Moulded displacement at moulded draught = 85 per cent. of moulded depth **12041** tons
Coefficient of fineness for use with Tables **.770**

Port of Survey London
Date of Survey 29th June '32
Name of Surveyor _____
Particulars of Classification +100A1

Depth for Freeboard (D) Moulded depth ... Stringer plate ... Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 31.04	Depth correction (a) Where D is greater than Table depth (D - Table depth) R = 13.23 (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) Standard Round of Beam = $\frac{B \times 12}{50} =$ Ship's Round of Beam = Difference Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) =$.06
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Enclosed ...					
Overhang ...					
R.Q.D. enclosed ...					
Overhang ...					
Bridge enclosed ...					
Overhang aft ...					
Overhang forward ...					
File enclosed ...					
Overhang ...					
Trunk aft ...					
Forward ...					
Tonnage opening aft ...					
Forward ...					
Total ...	201.75	201.53			201.53

Standard Height of Superstructure _____
 " " R.Q.D. _____
 Deduction for complete superstructure **41.96**
 Percentage covered $\frac{S}{L} =$ **50.50%**
 " " $\frac{S_1}{L} =$ **50.44%**
 " " $\frac{E}{L} =$ **50.44%**
 Percentage from Table, Line A.
 (corrected for absence of forecastle (if required))
 Percentage from Table, Line B. **TIMBER 69.52%**
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required)
 Deduction = **41.96 × .6952 = 29.17**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...		1					1		
1/2 L from A.P. ...		4					4		
1/2 L " ...		2					2		
Amidships ...		4					4		
1/2 L from F.P. ...		2					2		
1/2 L " ...		4					4		
F.P. ...		1					1		
Total ...									

Mean actual sheer aft =
 Mean standard sheer aft =
 Mean actual sheer forward =
 Mean standard sheer forward =
 Length of enclosed superstructure forward of amidships =
 " " aft of " =
 Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ **-2.47**
 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. Depth to Freeboard Deck = 31.04 Summer freeboard = 4.79 Moulded draught (d) = 26.25 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.56 = 6 1/2 Addition for Winter North Atlantic Freeboard (if required) = $\frac{d}{3} = 8.75 = 8 3/4 $	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ 12060 Tons per inch immersion at summer load water line $T =$ 40 Deduction = $\frac{\Delta}{40T}$ inches = 7.54 7 1/2	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient 76.07 <table border="1" style="width: 100%;"> <tr><th></th><th>+</th><th>-</th></tr> <tr><td>Depth Correction ...</td><td>13.23</td><td></td></tr> <tr><td>Deduction for superstructures ...</td><td></td><td>29.17</td></tr> <tr><td>Sheer correction ...</td><td></td><td>2.47</td></tr> <tr><td>Round of Beam correction ...</td><td></td><td>.06</td></tr> <tr><td>Correction for Thickness of Deck amidships ...</td><td></td><td></td></tr> <tr><td>Other corrections, scantlings, etc. ...</td><td></td><td></td></tr> <tr><td>13.23</td><td>31.70</td><td>-18.47</td></tr> <tr><td colspan="3">Summer Freeboard = 57.60</td></tr> </table>		+	-	Depth Correction ...	13.23		Deduction for superstructures ...		29.17	Sheer correction ...		2.47	Round of Beam correction06	Correction for Thickness of Deck amidships ...			Other corrections, scantlings, etc. ...			13.23	31.70	-18.47	Summer Freeboard = 57.60		
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TIMBER SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

TIMBER Tropical Fresh Water Line above Centre of Disc ...	28	TIMBER Tropical Fresh Water Freeboard ...	3-7 1/2
" Fresh Water Line " "	21 1/2	" Fresh Water " "	4-2
" Tropical Line " "	20 1/2	" Tropical " "	4-3
" Winter Line below above	5 1/2	" Winter " "	5-6 1/4
" Winter North Atlantic Line below	6 1/4	" Winter North Atlantic " "	6-5 3/4
TIMBER SUMMER LINE above	14		

4-9 1/2
3-7 1/2
4-2
4-3
5-6 1/4
6-5 3/4

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