

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>BRIGHTON</b>	Official Number <b>169168</b>	Nationality and Port of Registry <b>BRITISH NEWCASTLE</b>	Gross Tonnage <b>8 MS.</b>	Date of Build <b>1943</b>	Port of Survey <b>10.9.48</b>
Moulded Dimensions: Length <b>412.50'</b> Breadth <b>57.66'</b> Depth <b>28.75'</b> <i>To Centre of Keel</i>					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>12415</b> tons					Particulars of Classification <b>+100 A1 with freeboard.</b>
Coefficient of fineness for use with Tables <b>.748</b>					

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <b>28.75</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>(28.78-27.50) 3 = +3.84"</b>	Moulded Breadth (B) <b>57.66</b>
Stringer plate ... <b>.03</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{57.66 \times 12}{50} = 13.84$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <b>13.88</b>
Depth for Freeboard (D) = <b>28.78</b>		Difference <b>.03</b>
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.03}{4} \times \dots = .03 \times$

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<b>35.75</b>	<b>35.75</b>			<b>35.75</b>
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...	<b>371.75</b>	<b>371.75</b>	<b>9'-1"</b>	<b>✓</b>	<b>371.75</b>
„ overhang aft ...					
„ overhang forward ...					
Fore enclosed ...					
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...	<b>5.00</b>	<b>2.50</b>			<b>2.50</b>
„ „ forward ...					
Total ...	<b>412.50</b>	<b>410.00</b>			<b>410.00</b>

Standard Height of Superstructure **7.50**  
R.Q.D. **✓**  
Deduction for complete superstructure **42.00**  
Percentage covered  $\frac{S}{L} = 100$   
Percentage from Table, Line A. & B. **99.26**  
(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 = **42.00 × .9926 = 41.69**

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	Product
A.P. ...	<b>51.25</b>	<b>1</b>	<b>51.25</b>	<b>78.125</b>	<b>77.125</b>	<b>1</b>	<b>77.12</b>
$\frac{1}{8}L$ from A.P. ...	<b>22.81</b>	<b>4</b>	<b>91.24</b>	<b>34.875</b>	<b>43.22</b>	<b>4</b>	<b>172.88</b>
$\frac{2}{8}L$ „ ...	<b>5.635</b>	<b>2</b>	<b>11.27</b>	<b>8.75</b>	<b>10.68</b>	<b>2</b>	<b>21.36</b>
Amidships ...	<b>-</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>
$\frac{3}{8}L$ from F.P. ...	<b>11.275</b>	<b>2</b>	<b>22.55</b>	<b>11.625</b>	<b>13.64</b>	<b>2</b>	<b>27.28</b>
$\frac{4}{8}L$ „ ...	<b>45.61</b>	<b>4</b>	<b>182.44</b>	<b>46.75</b>	<b>55.18</b>	<b>4</b>	<b>220.72</b>
F.P. ...	<b>102.50</b>	<b>1</b>	<b>102.50</b>	<b>105</b>	<b>124.00</b>	<b>1</b>	<b>124.00</b>
Total ...			<b>461.25</b>	<b>49</b>			<b>663.36</b>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{202.11 \times .25}{18} = -2.81"$   
If limited on account of midship superstructure.

Mean actual sheer aft = **Excess**  
Mean standard sheer aft = **Excess**  
Mean actual sheer forward = **Excess**  
Mean standard sheer forward = **Excess**  
Length of enclosed superstructure forward of amidships = **C.S.S.**  
aft of „ = **C.S.S.**

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 <b>748 + 68 = 1426</b> <b>1.36</b>
Ft.	$\Delta =$	
Depth to Freeboard Deck = <b>28.78</b>	Tons per inch immersion at summer load water line	
Summer freeboard = <b>3.21</b>	T =	
Moulded draught (d) = <b>25.57</b>	Deduction = $\frac{\Delta}{40 T}$ inches	
Deduction for Tropical freeboard and addition for		
Winter freeboard = $\frac{d}{4}$ inches = <b>6.39" = 6 1/2"</b>		
Addition for Winter North Atlantic Freeboard (if required) =		

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

Tropical Fresh Water Line above Centre of Disc	...	<b>13 1/2"</b>
Fresh Water Line	...	<b>7"</b>
Tropical Line	...	<b>6 1/2"</b>
Winter Line below	...	<b>6 1/2"</b>
Winter North Atlantic Line	...	<b>✓</b>

Tropical Fresh Water Freeboard	...	<b>3'-2 1/2"</b>
Fresh Water	...	<b>2'-1"</b>
Tropical	...	<b>2'-7 1/2"</b>
Winter	...	<b>2'-8"</b>
Winter North Atlantic	...	<b>3'-9"</b>