

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>"BRITISH MAJOR"</b>	Official Number <b>180838</b>	Nationality and Port of Registry <b>British. London.</b>	Gross Tonnage <b>8564</b>	Date of Build <b>2 mo. 1946</b>	Port of Survey <b>Sunderland</b>
Moulded Dimensions: Length <b>463.46</b> Breadth <b>61.75</b> Depth <b>34.00</b> <i>To centre of rudder stock</i>					Date of Survey <b>During construction</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>10,231</b> tons					Surveyor's Signature <b>Neil F.H. Duncan</b>
Coefficient of fineness for use with Tables <b>.770</b>					Particulars of Classification <b>+100A1 Carrying Petroleum in Bulk (Contemplated)</b>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <b>34.00</b>	(a) Where D is greater than Table depth (D - Table depth) R = <b>(34.14 - 30.89) x 3 = +9.75</b>	Moulded Breadth (B) <b>61.75</b>
Stringer plate ... <b>.06</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>3.15</b>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{61.75 \times 12}{50} = \mathbf{14.82}$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures <b>✓</b>	Ship's Round of Beam = <b>15.50</b>
Depth for Freeboard (D) = <b>34.14</b>		Difference <b>.68</b>
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.68}{4} \times .5828 = \mathbf{.10}$

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <i>equiv</i> ...	<b>96.79</b>	<b>96.79</b>	<b>8.0</b>	<b>-</b>	<b>96.79</b>
„ overhang <i>h</i> ...	<b>1.33</b>	<b>.66</b>	<b>8.0</b>	<b>-</b>	<b>.66</b>
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed <i>equiv</i> ...	<b>42.67</b>	<b>42.67</b>	<b>8.0</b>	<b>-</b>	<b>42.67</b>
„ overhang aft ...	<b>3.50</b>	<b>2.63</b>	<b>8.0</b>	<b>-</b>	<b>2.63</b>
„ overhang forward <i>equiv</i> ...	<b>.83</b>	<b>.42</b>	<b>8.0</b>	<b>-</b>	<b>.42</b>
F'cle enclosed <i>equiv</i> ...	<b>50.10</b>	<b>50.10</b>	<b>8.0</b>	<b>-</b>	<b>50.10</b>
„ overhang <i>equiv</i> ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	<b>195.30</b>	<b>193.33</b>			<b>193.33</b>

Standard Height of Superstructure **7.5'**  
R.Q.D. **42.00'**  
Deduction for complete superstructure **42.00'**  
Percentage covered  $\frac{S}{L} = \frac{193.33}{455.14} = \mathbf{42.14\%}$   
Percentage from Table, Line A. Tanker **32.72**  
(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 x .3272 = -13.74**

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<b>56.35</b>	<b>1</b>	<b>56.35</b>	<b>56</b>	<b>56.0</b>	<b>1</b>	<b>56.00</b>
$\frac{1}{4}$ L from A.P. ...	<b>25.075</b>	<b>4</b>	<b>100.30</b>	<b>25</b>	<b>25.0</b>	<b>4</b>	<b>100.00</b>
$\frac{2}{8}$ L „ ...	<b>6.195</b>	<b>2</b>	<b>12.39</b>	<b>6.25</b>	<b>6.25</b>	<b>2</b>	<b>12.50</b>
Amidships ...	<b>-</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>
$\frac{2}{8}$ L from F.P. ...	<b>12.39</b>	<b>2</b>	<b>24.78</b>	<b>12.125</b>	<b>12.125</b>	<b>2</b>	<b>24.25</b>
$\frac{1}{4}$ L „ ...	<b>50.15</b>	<b>4</b>	<b>200.60</b>	<b>50.25</b>	<b>50.15</b>	<b>4</b>	<b>200.60</b>
F.P. ...	<b>112.69</b>	<b>1</b>	<b>112.69</b>	<b>111.25</b>	<b>111.25</b>	<b>1</b>	<b>111.25</b>
Total ...			<b>507.11</b>				<b>505.00</b>

Mean actual sheer aft  $\frac{507.11}{18} = \mathbf{28.17}$   
Mean standard sheer aft  $\frac{505.00}{18} = \mathbf{28.06}$   
Mean actual sheer forward  $\frac{507.11}{18} = \mathbf{28.17}$   
Mean standard sheer forward  $\frac{505.00}{18} = \mathbf{28.06}$   
Length of enclosed superstructure forward of amidships = **111.25**  
aft of „ = **111.25**  
If limited to maximum allowance of  $1\frac{1}{2}$  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 $\Delta = \mathbf{17300}$	Correction for coefficient $\frac{770 + .68 - 1.450}{1.36} = \mathbf{5343}$
Depth to Freeboard Deck = <b>34.14</b>	Tons per inch immersion at summer load water line $T = \mathbf{58.30}$	Depth Correction ... <b>9.75</b>
Summer freeboard = <b>6.64</b>	Deduction = $\frac{\Delta}{40 T} = \frac{17300}{40 \times 58.30} = \mathbf{7.42}$	Deduction for superstructures ... <b>13.74</b>
Moulded draught (d) = <b>17.50</b>		Sheer correction ... <b>.06</b>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{17.50}{4} = \mathbf{4.375} = \mathbf{4\frac{3}{8}}$		Round of Beam correction ... <b>.10</b>
Addition for Winter North Atlantic Freeboard (if required) = $6.87 + 4.63 = \mathbf{11.50} = \mathbf{11\frac{1}{2}}$		Correction for Thickness of Deck amidships ... <b>-</b>
		Other corrections, scantlings, etc. ... <b>-</b>
		Summer Freeboard = <b>79.74</b>

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

Tropical Fresh Water Line above Centre of Disc	... <b>14.14</b>	Tropical Fresh Water Freeboard	... <b>5.14</b>
Fresh Water Line	... <b>7.12</b>	Fresh Water	... <b>6.14</b>
Tropical Line	... <b>6.34</b>	Tropical	... <b>6.14</b>
Winter Line below	... <b>6.34</b>	Winter	... <b>7.14</b>
Winter North Atlantic Line	... <b>11.12</b>	Winter North Atlantic	... <b>7.14</b>



# British Major.

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Displacement Extreme at Summer Load draft = 17,300 tons

Tons per inch = 58.30 tons

Keel = 1"

Stringer =  $\frac{3}{4}$ "

Equivalent length of Roop.

length at centre 98.37 /  
" " Side 93.62 /  
 $4.75 \times \frac{2}{3} = 3.17$   
93.62

Equivalent midsea length = 96.79 /

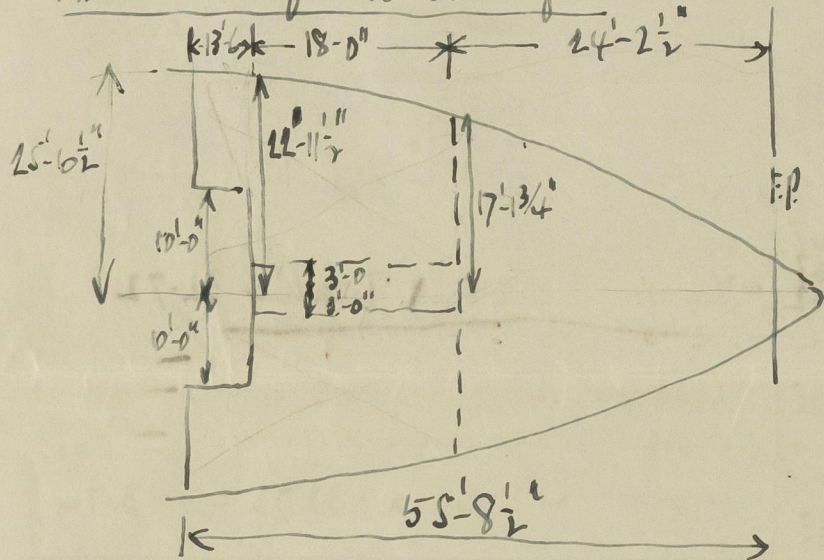
Equivalent overhang =  $4.5 - 3.17$   
= 1.33 /

Equivalent length of Passage

Side 40  
Centre 44  
 $\frac{4}{3} \times \frac{2}{3} = 2.67$   
40  
Equiv. 42.67

Overhang fwd  
3.5  
- 2.67  
= .83 equiv.

Forecastle equivalent length



Sheer forward.

Stations

12.34	3	37.17	12.125	3	36.37
50.15	3	150.45	50.25	3	150.75
112.69	1	112.69	111.25	1	111.25
		300.31			298.37
		298.37			= .993
		300.31			

Length forward of passage = 24.21

At side of passage  
 $\frac{22.96 + 17.14}{2} = 20.05$   
 $18 \times 17.05$   
 $\frac{20.05}{20.05}$

passage  
 $(18 \times 15.31) \times .993$   
= + 2.67

Sideways.  
 $\frac{25.87 + 22.96}{2} = 24.42$   
 $13.5 \times 14.42$   
 $\frac{24.42}{24.42}$

+ 7.97  
50.16  
equivalent.

Equivalent curved

18  
24.21  
42.21  
7.97  
50.18

Trade of ship

Tanker.

Names of sister ships

Builder's name and yard number

Wm Dornford & Sons Ltd Yard no 734.

Owners

British Tankers Co Ltd.

Fee £

19.

Will be charged on F.E



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