

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

GRK. REPORT N° 24053.

Ship's Name <b>BRITISH PATRIOT</b>	Official Number <b>183195</b>	Nationality and Port of Registry <b>BRITISH LONDON</b>	Gross Tonnage <b>8661</b>	Date of Build <b>1949</b>	Port of Survey <b>GREENOCK</b>
Moulded Dimensions: Length <b>464.0</b> Breadth <b>61.5</b> Depth <b>34.0</b> To C of P, UPPER STOCK					Date of Survey <b>WHILE BUILDING</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>18335</b> tons					Surveyor's Signature <b>Pennethy Inglis</b>
Coefficient of fineness for use with Tables <b>-778</b>					Particulars of Classification <b>100A1 CARRYING PETROLEUM IN BULK</b>

<b>DEPTH FOR FREEBOARD (D).</b>	<b>DEPTH CORRECTION.</b>	<b>ROUND OF BEAM CORRECTION.</b>
Moulded depth ... .. <b>34.00</b>	(a) Where D is greater than Table depth (D - Table depth) R = <b>(34.06 - 30.93) 3 = +9.39</b>	Moulded Breadth (B) <b>61.5</b>
Stringer plate ... .. <b>7.2" 06</b>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>3.33</b>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{61.5 \times 12}{50} = 14.76$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <b>-</b>	If restricted by superstructures <b>-</b>	Ship's Round of Beam = <b>14.75</b>
Depth for Freeboard (D) = <b>34.06</b>		Difference <b>.01</b>
		Restricted to <b>-</b>
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{0.01 \times 1793}{4} = 4.48$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <b>Equiv</b>	<b>97.83</b>	<b>97.83</b>	<b>8.00</b>	<b>-</b>	<b>97.83</b>
" overhang	<b>4.5</b>	<b>4.5</b>	"	"	<b>.58</b>
R.Q.D. enclosed	<b>47.5</b>	<b>47.5</b>	<b>8.0</b>	<b>-</b>	<b>47.50</b>
" overhang	<b>4.5</b>	<b>4.5</b>	"	"	<b>2.63</b>
Bridge enclosed <b>Equiv</b>	<b>44.5</b>	<b>44.5</b>	<b>8.0</b>	<b>-</b>	<b>44.50</b>
" overhang aft	<b>3.0</b>	<b>3.0</b>	"	"	<b>2.25</b>
" overhang forward	<b>3.5</b>	<b>3.5</b>	"	"	<b>46.83</b>
F'cle enclosed <b>Equiv</b>	<b>46.83</b>	<b>46.83</b>	<b>8.0</b>	<b>-</b>	<b>46.83</b>
" overhang	<b>46.83</b>	<b>46.83</b>	"	"	<b>46.83</b>
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<b>196.83</b>	<b>195.22</b>			<b>195.22</b>

Standard Height of Superstructure	<b>7.5</b>
" " R.Q.D.	<b>42.0</b>
Deduction for complete superstructure	<b>42.42</b>
Percentage covered $\frac{S}{L} =$	<b>42.07</b>
" " $\frac{S_1}{L} =$	<b>42.07</b>
" " $\frac{E}{L} =$	<b>33.07</b>
Percentage from Table, Line A. Tanker	<b>33.07</b>
(corrected for absence of forecastle (if required))	<b>-</b>
Percentage from Table, Line B.	<b>-</b>
(corrected for absence of forecastle (if required))	<b>-</b>
Interpolation for bridge less than .2L (if required)	<b>-</b>
Deduction =	<b>42 x .3307 = 13.89</b>

## SEE OVER. ✓ SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<b>56.40</b>	<b>1</b>	<b>56.40</b>	<b>56.40</b>	<b>56.40</b>	<b>56.40</b>	<b>1</b>	<b>56.40</b>	<b>56.40</b>
$\frac{1}{8}L$ from A.P.	<b>25.10</b>	<b>4</b>	<b>100.40</b>	<b>25.10</b>	<b>25.10</b>	<b>25.10</b>	<b>4</b>	<b>100.40</b>	<b>100.40</b>
$\frac{2}{8}L$ "	<b>6.205</b>	<b>2</b>	<b>12.41</b>	<b>6.3</b>	<b>6.205</b>	<b>6.205</b>	<b>2</b>	<b>12.41</b>	<b>12.41</b>
Amidships	<b>-</b>	<b>4</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>-</b>	<b>-</b>
$\frac{3}{8}L$ from F.P.	<b>12.41</b>	<b>2</b>	<b>24.82</b>	<b>11.75</b>	<b>11.75</b>	<b>11.75</b>	<b>2</b>	<b>23.50</b>	<b>23.50</b>
$\frac{4}{8}L$ "	<b>50.20</b>	<b>4</b>	<b>200.80</b>	<b>49.5</b>	<b>49.5</b>	<b>49.5</b>	<b>4</b>	<b>198.20</b>	<b>198.20</b>
F.P.	<b>112.80</b>	<b>1</b>	<b>112.80</b>	<b>114.</b>	<b>114.0</b>	<b>114.0</b>	<b>1</b>	<b>114.20</b>	<b>114.20</b>
Total			<b>507.63</b>					<b>504.71</b>	

Correction =  $\frac{\text{Difference between sums of products}}{18} = \frac{2.92}{18} = .162$ 

If limited on account of midship superstructure.

Mean actual sheer aft = **6 x cm**Mean actual sheer forward = **Deficient**Length of enclosed superstructure forward of amidships = **7 Tanker**aft of " = **-**If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

<b>Deduction for Tropical Freeboard.</b>	<b>Deduction for Fresh Water.</b>	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required)
<b>Addition for Winter and Winter North Atlantic Freeboard.</b>	Displacement in salt water at summer load water line <b>28.17780</b>	Correction for coefficient <b>778 + 68 = 1458</b>
Depth to Freeboard Deck = <b>34.06</b>	$\Delta = 27.17074$	Depth Correction ... .. <b>9.39</b>
Summer freeboard = <b>6.67</b>	Tons per inch immersion at summer load water line <b>28.58.88</b>	Deduction for superstructures ... .. <b>13.89</b>
Moulded draught (d) = <b>27.39</b>	$T = 27.58.55$	Sheer correction ... .. <b>.09</b>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>6.85 = 6.84</b>	Deduction = $\frac{\Delta}{40 T}$ inches = <b>7.41</b>	Round of Beam correction ... .. <b>-</b>
Addition for Winter North Atlantic Freeboard (if required) = <b>6.85 + 4.64 = 11.49 = 11.5</b>	<b>- 7.2</b>	Correction for Thickness of Deck amidships ... .. <b>-</b>
		Other corrections, scantlings, etc. ... .. <b>-</b>
		Summer Freeboard = <b>79.96</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>14.4</b>
Fresh Water Line	"	<b>7.2</b>
Tropical Line	"	<b>6.34</b>
Winter Line	below	<b>6.34</b>
Winter North Atlantic Line	"	<b>11.2</b>

Tropical Fresh Water Freeboard	...	<b>61.84</b>
Fresh Water	"	<b>51.534</b>
Tropical	"	<b>61.02</b>
Winter	"	<b>61.144</b>
Winter North Atlantic	"	<b>71.234</b>



# British Patriot

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.

Deck side 94.5  
 $\frac{2}{3} \times 5 = 3.33$   
97.83  
 overhang 4.5 - 3.33  
 = 1.17

Bridge side 44.5  
 $4.5 \times \frac{2}{3} = 3$   
47.5  
 overhang end = 3.5 - 3 = .5

