

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

DUN. RPT. N° 9494.

*EMPIRE RHODES 36661*

**EMPIRE FAVOUR**

Ship's Name: **EMPIRE FAVOUR** Official Number: **166221** Nationality and Port of Registry: **Greek** Gross Tonnage: **7056** Date of Build: **1945**

Port of Survey: **Dundee**

Date of Survey: **During Construction**

Surveyor's Signature: **A. M. Queen**

Particulars of Classification: **+100 A-1 with freeboard.**

Moulded Dimensions: Length **425** Breadth **56.0** Depth **34.66**

To CR. OF RUDDER STOCK **425.937**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **14120** tons

Coefficient of fineness for use with Tables **.785**

**Depth for Freeboard (D).**

Moulded depth ... **37.66**

Stringer plate ... **.06**

Sheathing on exposed deck **✓**

$T \left( \frac{L-S}{L} \right) =$

Depth for Freeboard (D) = **37.72**

**Depth correction.**

(a) Where D is greater than Table depth  
(D - Table depth) R = **(37.72 - 28.40) × 3 = +27.96**

(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) **56.0**

Standard Round of Beam =  $\frac{B \times 12}{50} =$  **13.44**

Ship's Round of Beam = **14"**

Difference **.56**

Restricted to **✓**

Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.56}{4} \times .9163 = -.13$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
.. overhang ...					
R.Q.D. enclosed ...					
.. overhang ...					
Bridge enclosed ...					
.. overhang aft ...					
.. overhang forward ...					
Forecastle enclosed ...	<b>35.66</b>	<b>35.66</b>	<b>6.45</b>	<b>6.75</b>	<b>32.09</b>
.. overhang ...					
Trunk aft ...					
.. forward ...					
Tonnage opening aft ...					
.. forward ...					
Total ...	<b>35.66</b>	<b>35.66</b>			<b>32.09</b>

Standard Height of Superstructure **7.5**

.. R.Q.D. **✓**

Deduction for complete superstructure **42.00**

Percentage covered  $\frac{S}{L} =$  **8.37**

..  $\frac{S_1}{L} =$  **8.37**

..  $\frac{E}{L} =$  **7.53**

Percentage from Table, Line A. **3.76**

(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 × .0376 = -1.58**

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
AP. CR. OF RUDDER STOCK	<b>52.59</b>	<b>1</b>		<b>52.59</b>	<b>32.25</b>	<b>32.25</b>	<b>1</b>		<b>32.25</b>
$\frac{1}{2}$ L from AP ...	<b>23.405</b>	<b>4</b>		<b>93.62</b>	<b>0.125</b>	<b>.125</b>	<b>4</b>		<b>.50</b>
$\frac{2}{3}$ L ..	<b>5.785</b>	<b>2</b>		<b>11.57</b>	<b>0</b>	<b>-</b>	<b>2</b>		<b>-</b>
Amidships ...	<b>-</b>	<b>4</b>		<b>-</b>	<b>0</b>	<b>-</b>	<b>4</b>		<b>-</b>
$\frac{2}{3}$ L from F.P. ...	<b>11.57</b>	<b>2</b>		<b>23.14</b>	<b>0</b>	<b>-</b>	<b>2</b>		<b>-</b>
$\frac{1}{2}$ L ..	<b>46.81</b>	<b>4</b>		<b>187.24</b>	<b>6.5</b>	<b>6.50</b>	<b>4</b>		<b>26.00</b>
F.P. ...	<b>105.19</b>	<b>1</b>		<b>105.19</b>	<b>81</b>	<b>81.00</b>	<b>1</b>		<b>81.00</b>
Total ...				<b>473.35</b>					<b>139.75</b>

Mean actual sheer aft = **Deficient.**

Mean standard sheer aft

Mean actual sheer forward = **Deficient.**

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = **Deficient**

.. aft of .. = **Sheers**

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - \frac{S}{2L}}{.7082} \right) = \frac{333.60}{18} \left( \frac{.75 - .0418}{.7082} \right) = +13.12$

If limited on account of midship superstructure. **✓**

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>79.64 + 1.58</b>	<b>81.22</b>
<b>Addition for Winter and Winter North Atlantic Freeboard.</b>	Displacement in salt water at summer load water line	Correction for coefficient $\frac{.785 + .68}{1.36} \times \frac{1.465}{1.36}$	<b>87.49</b>
Depth to Freeboard Deck = <b>37.72</b>	$\Delta =$ <b>13981</b>	Depth Correction ... <b>27.96</b>	
Summer freeboard = <b>11.08</b>	Tons per inch immersion at summer load water line	Deduction for superstructures ... <b>- 1.58</b>	
Moulded draught (d) = <b>26.64</b>	$T =$ <b>49.04</b>	Sheer correction ... <b>13.12</b>	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>6.66 = 6<math>\frac{3}{4}</math>"</b>	Deduction = $\frac{\Delta}{40T}$ inches = <b>7.13</b>	Round of Beam correction ... <b>- 13</b>	
Addition for Winter North Atlantic Freeboard (if required) = <b>✓</b>	<b>= 7<math>\frac{1}{4}</math></b>	Correction for Thickness of Deck amidships ... <b>-</b>	
		Other corrections, scantlings, etc. to correspond to an extreme summer draught of <b>26'-9"</b>	
		<b>47.22</b>	<b>+ 45.51</b>
		Summer Freeboard = <b>133.00</b>	

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, **wood**, Steel, Deck: **11'-1"**

Tropical Fresh Water Line above Centre of Disc ... <b>14"</b>	Tropical Fresh Water Freeboard ... <b>9'-11"</b>
Fresh Water Line " " ... <b>7<math>\frac{1}{4}</math>"</b>	Fresh Water " " ... <b>10'-5<math>\frac{3}{4}</math>"</b>
Tropical Line " " ... <b>6<math>\frac{3}{4}</math>"</b>	Tropical " " ... <b>10'-6<math>\frac{1}{4}</math>"</b>
Winter Line below " " ... <b>6<math>\frac{3}{4}</math>"</b>	Winter " " ... <b>11'-7<math>\frac{3}{4}</math>"</b>
Winter North Atlantic Line " " ... <b>✓</b>	Winter North Atlantic " " ... <b>✓</b>



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.

Trade of ship

*General*

Names of sister ships

*'Empire Rhodes' Dundee Rpt no 9268, 'Empire Heywood' Dundee Rpt no 9294, 'Empire Prince' Dundee Rpt no 9301, 'Empire Archer' Dundee Rpt no 9324, 'Empire Canyon' Dundee Rpt no 9349.*

Builder's name and yard number

*The Caledon S.B. & Co Ltd. Yard no 411*

Owners

*The Ministry of War Transport.*

Fee £

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