

AMENDED COMPUTATION.

Rpt. C.11 (Comp.).

Index No.

(For London Office only.)

MAZSAHL.  
38456.  
SIMILAR.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>"HESPERIDES."</b>	Official Number <b>180929.</b>	Nationality and Port of Registry <b>BRITISH.</b>	Gross Tonnage <b>7301</b> <i>44151</i>	Date of Build <b>1946.</b>	Port of Survey
Moulded Dimensions: Length <b>425.79</b> Breadth <b>56.00</b> Depth <b>38.05</b> To L. of Rudder Stock.					Date of Survey <b>18/4/50.</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>17120</b> tons					Surveyor's Signature
Coefficient of fineness for use with Tables <b>.777</b>					Particulars of Classification <b>+ 100 A1.</b> WITH FREEBOARD.

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth ...	<b>38.05</b>	(a) Where D is greater than Table depth (D-Table depth) R =	<b>(38.11-28.39) 3. = +29.16"</b>	Moulded Breadth (B)	<b>56.00</b>
Stringer plate ...	<b>.06</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	<b>9.72</b>	Standard Round of Beam = $\frac{B \times 12}{50}$	<b>= 13.44"</b>
Sheathing on exposed deck				Ship's Round of Beam <i>Expir.</i>	<b>= 14.25"</b>
$T \left( \frac{L-S}{L} \right) =$				Difference	<b>.81</b>
Depth for Freeboard (D) =	<b>38.11</b>	If restricted by superstructures	<b>✓</b>	Restricted to	
				Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right)$	<b>= <math>\frac{.81}{4} \times 8437 = -.17</math></b>

DEDUCTION FOR SUPERSTRUCTURES.				
Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<b>32.29</b>	<b>7.5</b>	<b>✓</b>	<b>32.29</b>
" overhang ...				
R.Q.D. enclosed ...				
" overhang ...				
Bridge enclosed ...				
" overhang aft ...				
" overhang forward ...				
Fore enclosed ...	<b>34.25</b>	<b>7.0</b>	<b>7.0/7.5</b>	<b>31.96</b>
" overhang ...				
Trunk aft ...				
" forward ...				
Tonnage opening aft ...				
" " forward ...				
Total ...	<b>66.54</b>			<b>64.25</b>

Standard Height of Superstructure **7.50** ✓  
" " R.Q.D. **✓**  
Deduction for complete superstructure **42.00** ✓  
Percentage covered  $\frac{S}{L} =$  **15.63** ✓  
" "  $\frac{S_1}{L} =$  **15.09** ✓  
Percentage from Table, Line A. **7.55** ✓  
(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 × .0755 = - 3.17** ✓

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<b>52.58</b>	<b>✓ 1</b>	<b>52.58</b>	<b>10.75</b>	<b>✓ 10.75</b>	<b>✓ 1</b>	<b>10.75</b>
1/2 L from A.P. ...	<b>23.40</b>	<b>✓ 4</b>	<b>93.60</b>	<b>.125</b>	<b>✓ .125</b>	<b>✓ 4</b>	<b>.50</b>
1/2 L " ...	<b>5.78</b>	<b>✓ 2</b>	<b>11.56</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>
Amidships ...	<b>✓</b>	<b>4</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>4</b>	<b>✓</b>
1/2 L from F.P. ...	<b>11.57</b>	<b>✓ 2</b>	<b>23.14</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>
1/2 L " ...	<b>46.80</b>	<b>✓ 4</b>	<b>187.20</b>	<b>5.75</b>	<b>✓ 5.75</b>	<b>✓ 4</b>	<b>23.00</b>
F.P. ...	<b>105.16</b>	<b>✓ 1</b>	<b>105.16</b>	<b>78.75</b>	<b>✓ 78.75</b>	<b>✓ 1</b>	<b>78.75</b>
Total ...			<b>473.24</b>				<b>113.00</b>

Mean actual sheer aft = **10.75**  
Mean standard sheer aft = **10.75**  
Mean actual sheer forward = **5.75**  
Mean standard sheer forward = **5.75**  
Length of enclosed superstructure forward of amidships = **DEFICIENT.**  
" " aft of " = **SHEERS.**

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{S}{2L} \right) = \frac{360.24}{18} \left( \frac{.75}{2 \times 425.79} \right) = +13.44"$   
If limited on account of midship superstructure. **✓**  
If limited to maximum allowance of 1 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	<b>Δ = 13880.</b>	Correction for coefficient	<b>777 + 68. = 1457</b> <b>1.36 = 1.36</b>
Depth to Freeboard Deck =	<b>38.11</b>	Tons per inch immersion at summer load water line	<b>T = 48.78.</b>	Depth Correction	<b>29.16</b>
Summer freeboard =	<b>11.42</b>	Deduction = $\frac{\Delta}{40 T}$ inches	<b>= 7"</b>	Deduction for superstructures	<b>3.17</b>
Moulded draught (d) =	<b>26.69</b>			Sheer correction	<b>13.44</b>
Deduction for Tropical freeboard and addition for				Round of Beam correction	<b>.17</b>
Winter freeboard = $\frac{d}{4}$ inches =	<b>6.67 = 6 3/4"</b>			Correction for Thickness of Deck amidships	<b>✓</b>
Addition for Winter North Atlantic Freeboard (if required) =	<b>✓</b>			Other corrections, scantlings, etc. <i>CORRECTIONS</i>	<b>12.47</b>
				To A SUMMER EXTREME DRAUGHT OF 26'-9" (26'-9 1/2" Actual).	<b>55.07</b>
				Summer Freeboard =	<b>137.00</b>

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

Tropical Fresh Water Line above Centre of Disc	...	13 3/4"	Tropical Fresh Water Freeboard	10'-3 3/4"
Fresh Water Line	"	7"	Fresh Water	10'-10"
Tropical Line	"	6 3/4"	Tropical	10'-10 1/4"
Winter Line	below	6 3/4"	Winter	11'-11 3/4"
Winter North Atlantic Line	"	...	Winter North Atlantic	...



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.

$$\text{CAMBER} = \frac{2(10 \times 14) + (8 \times 14)}{56} = \frac{280 + 112}{56} = \frac{392}{56} = 7.00''$$

$$\text{Equiv. Camber} = \frac{3}{2} + 7.00 = 8.50''$$

Trade of ship .....

Names of sister ships .....

Builder's name and yard number .....

Owners .....

Fee £ .....



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