

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, ~~SAILING SHIP~~, TANKER.)

Ship's Name <b>AYIA MARKELLA.</b>	Official Number	Nationality and Port of Registry <b>Greek Chios</b>	Gross Tonnage <b>8451</b>	Date of Build	Port of Survey <b>Sunderland</b>
Moulded Dimensions: Length <b>446.42'</b> Breadth <b>61.79'</b> Depth <b>40.16'</b>					Date of Survey <b>whilst building</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) <b>19644</b> tons					Surveyor's Signature <b>JAS. RENNIE</b>
Coefficient of fineness for use with Tables <b>.730</b>					Particulars of Classification <b>+100A1 (contemp.)</b>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <b>40.16'</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>(40.23-29.76) 3 = +31.41"</b>	Moulded Breadth (B) <b>61.79'</b>
Stringer plate ... <b>.81'</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>10.47</b>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>14.83'</b>
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures <b>-</b>	Ship's Round of Beam = <b>15'</b>
Depth for Freeboard (D) = <b>40.23</b>		Difference <b>.17'</b>
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.17}{4} \times .918 = -.04'$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	<b>36.59'</b>	<b>36.59'</b>	<b>7.5'</b>	<b>-</b>	<b>36.59'</b>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	<b>36.59'</b>	<b>36.59'</b>			<b>36.59'</b>

Standard Height of Superstructure **7.5'**

" " R.Q.D. **-**

Deduction for complete superstructure **42"**

Percentage covered  $\frac{S}{L} =$  **8.20**

" "  $\frac{S_1}{L} =$

" "  $\frac{E}{L} =$

Percentage from Table, Line A. **4.10**

(corrected for absence of fore-castle (if required))

Percentage from Table, Line B.

(corrected for absence of fore-castle (if required))

Interpolation for bridge less than .2L (if required)

Deduction = **42 x .0410 = -1.72"**

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<b>54.64</b>	<b>1</b>	<b>54.64</b>	<b>57.62</b>	<b>57.62</b>	<b>1</b>	<b>57.62</b>
$\frac{1}{4}$ L from A.P. ...	<b>24.32</b>	<b>4</b>	<b>97.28</b>	<b>13.12</b>	<b>13.12</b>	<b>4</b>	<b>52.48</b>
$\frac{2}{8}$ L " ...	<b>6.01</b>	<b>2</b>	<b>12.02</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>
Amidships ...	<b>-</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>
$\frac{3}{8}$ L from F.P. ...	<b>12.02</b>	<b>2</b>	<b>24.04</b>	<b>2.75</b>	<b>2.75</b>	<b>2</b>	<b>5.50</b>
$\frac{1}{4}$ L " ...	<b>48.63</b>	<b>4</b>	<b>194.52</b>	<b>36.25</b>	<b>36.25</b>	<b>4</b>	<b>145.00</b>
F.P. ...	<b>109.28</b>	<b>1</b>	<b>109.28</b>	<b>114.00</b>	<b>114.00</b>	<b>1</b>	<b>114.00</b>
Total ...			<b>491.78</b>				<b>374.60</b>

Mean actual sheer aft = **Deficient.**

Mean standard sheer aft = **Deficient.**

Mean actual sheer forward = **Deficient.**

Mean standard sheer forward = **Deficient.**

Length of enclosed superstructure forward of amidships = **NIL.**

" " aft of " = **NIL.**

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{117.18}{18} \left( \frac{.75 - .0410}{2} \right) = +4.62'$

If limited on account of midship superstructure. **7090** If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = <b>40.23'</b> Summer freeboard = <b>11.87'</b> Moulded draught (d) = <b>28.36'</b> Keel allowance = <b>-</b> Extreme draught = <b>-</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>7.09 = 180mm</b> Addition for Winter North Atlantic Freeboard (if required) = <b>-</b>	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta =$ <b>15918</b> Tons per inch immersion at summer load water line $T =$ <b>53.60</b> Deduction = $\frac{\Delta}{40 T}$ inches = <b>7.42"</b> <b>= 189mm</b>	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) <b>87.20</b> Correction for coefficient $\frac{.730 + .68}{1.36} = 1.41$ <b>1.36</b> Depth Correction ... <b>31.41</b> Deduction for superstructures ... <b>-</b> Sheer correction ... <b>4.62</b> Round of Beam correction ... <b>-04</b> Correction for Thickness of Deck amidships ... <b>-</b> Other corrections, scantlings, etc. <b>17.81</b> <b>to a summer moulded draught of 28'-4 3/8"</b> <b>53.84</b> <b>1.76</b> <b>52.08</b> <b>Summer Freeboard = 142.50</b>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	<b>369mm</b>	Tropical Fresh Water Freeboard	<b>3250mm</b>
Fresh Water Line " "	<b>189mm</b>	Fresh Water " "	<b>3430mm</b>
Tropical Line " "	<b>180mm</b>	Tropical " "	<b>3439mm</b>
Winter Line below " "	<b>180mm</b>	Winter " "	<b>3799mm</b>
Winter North Atlantic Line " "	<b>-</b>	Winter North Atlantic " "	<b>-</b>