

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Amundea assignment

Ship's Name IONIA ex BALTROVER.	Official Number	Nationality and Port of Registry Greek.	Gross Tonnage	Date of Build	Port of Survey
					Date of Survey 16.6.47
Moulded Dimensions: Length 349.4' Breadth 49.75' Depth 34.08'					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Particulars of Classification +100 A1 shell & keel w. pld.
Coefficient of fineness for use with Tables .734 assumed.					

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 34.08	(a) Where D is greater than Table depth (D - Table depth) R = $(34.08 - 23.29) \times 2.687 = +29.30"$	Moulded Breadth (B) 49.75'
Stringer plate04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = _____	Standard Round of Beam = $\frac{B \times 12}{50} = 11.94"$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \frac{2.5}{12} \times 33.44 = .07$	If restricted by superstructures _____	Ship's Round of Beam = 12.50"
Depth for Freeboard (D) = 34.19		Difference .56"
		Restricted to _____
		Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.56}{4} \times \frac{33.80}{49.75} = -.05"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Aft Bridge					
Poop enclosed equiv.	66.13	66.13	7.5	-	66.13
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed equiv.	126.80	126.80	8.0	-	126.80
" overhang aft28	.21			.21
" overhang forward ...					
F'cle enclosed equiv.	37.06	37.06	7.5	-	37.06
" overhang ...	2.28	1.14			1.14
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	232.85	231.34			231.34

Standard Height of Superstructure **6.99'**
" " R.Q.D. **38.63'**
Deduction for complete superstructure **38.63'**
Percentage covered $\frac{S}{L} = \frac{66.56}{126.80} = .525$
" " $\frac{S_1}{L} = \frac{66.20}{126.80} = .522$
" " $\frac{E}{L} = \frac{66.20}{126.80} = .522$
Percentage from Table, Line A. (corrected for absence of forecastle (if required)) **.5654**
Percentage from Table, Line B. (corrected for absence of forecastle (if required)) **.5654**
Interpolation for bridge less than .2L (if required) **-**
Deduction = **38.63 x .5654 = -21.84'**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	44.94	1	44.94	44.94	45.00	45.00	1	45.00	45.00
$\frac{1}{2}$ L from A.P. ...	20.00	4	80.00	19.75	19.75	19.75	4	79.00	79.00
$\frac{3}{4}$ L " ...	4.94	2	9.88	4.94	4.94	4.94	2	9.88	9.88
Amidships ...	-	4	-	-	-	-	4	-	-
$\frac{1}{2}$ L from F.P. ...	9.89	2	19.78	9.97	9.97	9.97	2	19.94	19.94
$\frac{3}{4}$ L " ...	34.99	4	139.96	34.90	34.90	34.90	4	139.60	139.60
F.P. ...	89.58	1	89.58	90.00	90.00	90.00	1	90.00	90.00
Total ...			404.44					403.42	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{1.02}{18} \left(.75 - \frac{.3328}{2 \times 126.80} \right) = +.02$
If limited on account of midship superstructure. **.4172** If limited to maximum allowance of 1 1/2 ins. per 100 ft. **-**

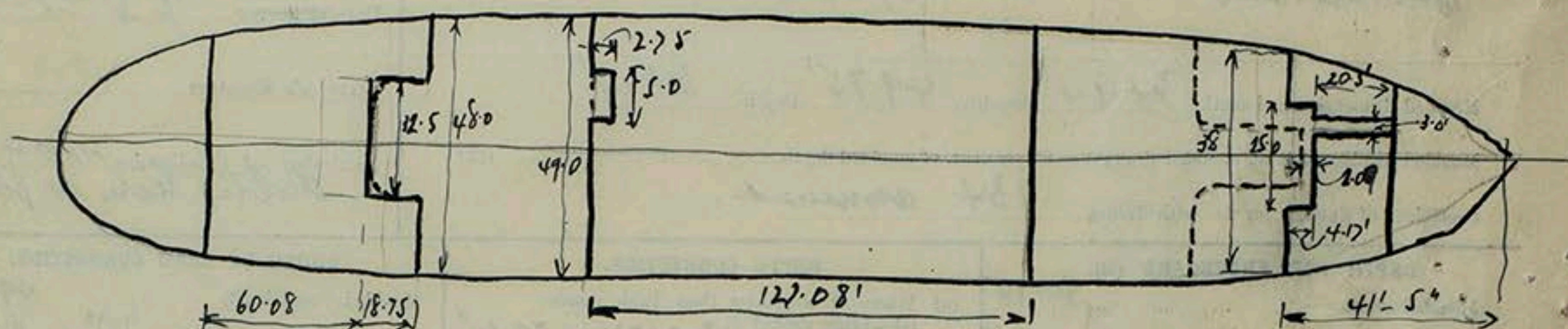
Mean actual sheer aft = **> .75**
Mean standard sheer aft = **> .75**
Mean actual sheer forward = **> .1**
Mean standard sheer forward = **> .1**
Length of enclosed superstructure forward of amidships = **> .1L**
" " aft of " = **> .1L**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 34.33 Summer freeboard = 10.50 Moulded draught (d) = 23.83 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = - Addition for Winter North Atlantic Freeboard (if required) = -	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40T}$ inches $\frac{d}{4} = 5.97"$ = 152 m/m	TABULAR FREEBOARD corrected for Blush Deck (if required) Correction for coefficient 734 + .68 = 1.414 / 1.36 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td>29.30</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures</td> <td>-</td> <td>21.84</td> </tr> <tr> <td>Sheer correction</td> <td>.02</td> <td>-</td> </tr> <tr> <td>Round of Beam correction</td> <td>-</td> <td>.05</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td>1.66</td> <td>-</td> </tr> <tr> <td>Other corrections, scantlings, etc. to correct</td> <td>58.34</td> <td>-</td> </tr> <tr> <td>Summer Freeboard</td> <td>126.00</td> <td>-</td> </tr> </table>		+	-	Depth Correction	29.30	-	Deduction for superstructures	-	21.84	Sheer correction	.02	-	Round of Beam correction	-	.05	Correction for Thickness of Deck amidships	1.66	-	Other corrections, scantlings, etc. to correct	58.34	-	Summer Freeboard	126.00	-
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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 152 m/m Fresh Water Line " 152 Tropical Line " NIL Winter Line " NIL Winter North Atlantic Line " NIL	Tropical Fresh Water Freeboard ... 3048 Fresh Water " ... 3048 Tropical " ... 3200 Winter " ... 3200 Winter North Atlantic " ... -
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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.



After Bridge

$$\begin{array}{r} \text{Reen } 18.75 \times 32.5 = 12.70 \\ \hline 48.0 \quad 78.83 \\ \text{Equivalent incl.} = 66.13 \end{array}$$

Main Bridge

$$\begin{array}{r} 127.08 \\ \text{Reen } 2.75 \times 5.0 = .28' \text{ o'hang.} \\ \hline 49 \quad 126.80 \text{ equiv.} \\ \text{inclined} \end{array}$$

Forecastle

$$\begin{array}{r} \text{Reen } 4.17 \times 25 = 104.2 \\ 20.5 \times 3 = 61.5 \\ \hline 165.7 \\ \hline 35 \end{array}$$

$$\begin{array}{r} 41.42 \\ 4.36 \\ \hline 37.06 \text{ equiv. incl.} \\ 4.36 \\ 2.08 \\ \hline 2.28 \text{ allowed o'hang.} \end{array}$$

Height of Mast

$$\text{Side Scuttle} = 24' - 4''$$

Baughe

$$23' 10''$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £

LR-FAF-TB6-65

