

LLOYD'S REGISTER OF SHIPPING

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER)

Received
 Index No.
 Govt. Copy
 Owners C11

Ship's Name APT AMBAR	Official Number	Nationality and Port of Registry GREEK	Gross Tonnage	Date of Build	Port of Survey LONDON H.G.
Moulded Dimensions: Length 421.33 Breadth 57.25 Depth 38.00					Date of Survey 31/3-66
Freeboard Length 421.33 TO $\frac{1}{2}$ OF RUDDER STOCK					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing)					Particulars of Classification
Coefficient of fineness for use with Tables 0.756					

DEPTH FOR FREEBOARD (D). Moulded depth ... 38.00 Stringer plate ... 0.05 Wood Sheathing on exposed deck / $T \left(\frac{L-S}{L} \right) = \left(\frac{421.33 - 2.5}{421.33} \right) \times \frac{2.5}{12} = 0.03$ Depth for Freeboard (D) = 38.08	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = $\frac{38.08 - 38.00}{12} = 0.0067$ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = $\frac{38.00 - 38.08}{12} = -0.0067$ If restricted by superstructures	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 57.25 Standard Round of Beam = $\frac{B \times 12}{50} = 13.74$ Ship's Round of Beam = 14 Difference 0.26 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{0.26}{4} \times 0.979 = 0.06$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	27.40	27.40	7.50		27.40
" overhang ...	4.00	3.20			3.20
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	31.40	30.40			30.40

Standard Height of Superstructure **7.50**
 " " R.Q.D. **5**
 Deduction for complete superstructure **42.00**
 Percentage covered $\frac{S}{L} = 0.40$
 $\frac{S_1}{L} = 0.36$
 $\frac{E}{L} = 0.21$
 Percentage from Table, Line A. **3.61**
 (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 = $0.0361 \times 42 = 1.52$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	M	Product
A.P. ...	52.13	1	52.13	42	42	1	42
$\frac{1}{2}$ L from A.P. ...	23.20	4	92.80	19	19	4	76
$\frac{1}{2}$ L " ...	5.73	2	11.46	5	5	2	10
Amidships ...	0	4	0	0	0	4	0
$\frac{1}{2}$ L from F.P. ...	11.47	2	22.94	9	9	2	18
$\frac{1}{2}$ L " ...	46.40	4	185.60	37	37	4	148
F.P. ...	104.27	1	104.27	84	84	1	84
Total ...			469.20				378

Mean actual sheer aft = **< 1**
 Mean standard sheer aft
 Mean actual sheer forward = **0.799**
 Mean standard sheer forward

Length of enclosed superstructure forward of amidships = **71.30**
 " " aft of " = **79.97**
 DEFICIENT SHEERS

Correction = $\frac{\text{Difference between sums of products}}{18} \left(0.75 - \frac{S}{2L} \right) = \frac{91.20}{18} (0.75 - 0.037) = 3.61$
 If limited on account of midship superstructure. If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **11.598**
 Summer freeboard = **3.063**
 Moulded draught (d) = **8.535**
 Keel allowance = **0.00**
 Extreme draught = **0.00**
 Deduction for Tropical freeboard and addition for = **0.00**

Winter freeboard = $\frac{d}{4}$ inches = **178 mm**

Addition for Winter North Atlantic Freeboard (if required) = **NOT 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 = $\frac{\Delta}{40 T}$ inches

$\frac{6.70}{6.30} \times 178 = 189 \text{ mm}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **0.756 + 0.680 = 1.05588**

Depth Correction ... **29.97**
 Deduction for superstructures ... **1.52**
 Sheer correction ... **3.61**
 Round of Beam correction **0.06**
 Correction for Thickness of Deck amidships ... **0.36**
 Other corrections, scantlings, etc. TO ... **4.51**

+	-
29.97	
1.52	
3.61	
0.06	
0.36	
4.51	
38.09	1.94

Summer Freeboard = **120.59** = **3063 mm**

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

Tropical Fresh Water Line above Centre of Disc ... **367 mm**
 Fresh Water Line " " ... **189 mm**
 Tropical Line " " ... **178 mm**
 Winter Line below " " ... **178 mm**
 Winter North Atlantic Line " " ... **NOT REQUIRED**

Tropical Fresh Water Freeboard ... **306 mm**
 Fresh Water " " ... **2874 mm**
 Tropical " " ... **2885 mm**
 Winter " " ... **3241 mm**
 Winter North Atlantic " " ... **NOT REQUIRED**

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.

SHEAR FORWARD :

STANDARD	ACTUAL
104,27	84
139,20	111
34,41	27
<u>277,88</u>	222 = 0,799 STANDARD

EQUIVALENT LENGTH OF FORECASTLE OVERHANG = 0,799 x 4 = 3,196'

Trade of Ship.....

Names of sister ships.....

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

Owners.....

Fee £.....:.....:.....

List of plans forwarded for reference. (See "Instructions to Surveyors, Part 4, 1950", paragraph 11.)

