

For consideration of Scantlings
for proposed alteration in length
Lloyd's Register of Shipping.

Index No. _____
(For London Office only.)

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name M.V. ARMILLA	Official Number 339.67	Nationality and Port of Registry 50	Gross Tonnage 19.25	Date of Build	Port of Survey
Moulded Dimensions: Length 339.67 Breadth 50 Depth 19.25					Date of Survey 27.3.64
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature
Coefficient of fineness for use with Tables .805 estimation (see over)					Particulars of Classification

DEPTH FOR FREEBOARD (D). Moulded depth 19.25 Stringer plate04 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ _____ Depth for Freeboard (D) = 19.29	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = _____ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = 22.65-19.29 = 2.61 2.61 x 3.36 = 8.78 If restricted by superstructures 8.78 x 5.5 = 48.29 48.29 / 6.897 = 7.00	ROUND OF BEAM CORRECTION. Moulded Breadth (B) _____ Standard Round of Beam = $\frac{B \times 12}{50} =$ _____ Ship's Round of Beam = Standard Difference _____ Restricted to _____ Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S}{L} \right) =$ Nil
---	--	--

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	88.17	88.17	5.5	-	88.17
„ overhang					
R.Q.D. enclosed					
„ overhang					
Bridge enclosed					
„ overhang aft					
„ overhang forward					
F'cle enclosed equiv	48.35	48.35	7.5	-	48.35
„ overhang					
Trunk aft		133.08	5.5	5.5 / 6.897	106.12
„ forward					
Tonnage opening aft					
„ „ forward					
Total	136.52	269.60			242.64

Standard Height of Superstructure 6.897	
„ „ R.Q.D. 5.184	5.184
Deduction for complete superstructure 37.98	
Percentage covered $\frac{S}{L} =$ 34.01	40.19
„ $\frac{S_1}{L} =$ 29.37	
„ $\frac{E}{L} =$ 71.43	
Percentage from Table, Line A. 64.76	Steamer
(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 = 37.98 x 64.76 = 24.60	

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P.	43.97	1		43.97	38.0	38.0	1
1/2 L from A.P.	19.865	4		78.26	9.0	9.0	4
1/2 L „	4.835	2		9.67	2.0	2.0	2
Amidships	-	4		-	-	-	4
1/2 L from F.P.	9.67	2		19.34	5.0	5.0	2
1/2 L „	39.13	4		156.52	24.0	24.0	4
F.P.	87.93	1		87.93	60.0	60.0	1
Total				395.69			

Mean actual sheer aft	< 1
Mean standard sheer aft	< 1
Mean actual sheer forward	< 1
Mean standard sheer forward	< 1
Length of enclosed superstructure forward of amidships	Definite
„ „ aft of „	Shore

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{151.69}{18} \left(.75 - \frac{4.63}{2 \times 339.67} \right) = +4.63$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 19.29 Summer freeboard = 2.63 Moulded draught (d) = 16.66 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 = $\frac{\Delta}{40 T}$ inches = _____	TABULAR FREEBOARD corrected for Fresh Deck (if required) Correction for coefficient 68 + .805 = 1.36 Depth Correction Deduction for superstructures Sheer correction Round of Beam correction Correction for Thickness of Deck amidships Other corrections, scantlings, etc. Summer Freeboard = 31.61
--	---	--

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc	...	Tropical Fresh Water Freeboard	...
Fresh Water Line	...	Fresh Water	...
Tropical Line	...	Tropical	...
Winter Line below	...	Winter	...
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.

Formula -

$$\Delta \text{ at } 85\% = 5590$$

$$32' \text{ amid } 744$$

$$2'-8 \text{ aft } 56$$

$$\hline 6390$$

$$32 \times 85 \times 19.25 \times 50 \times .995$$

$$\frac{35}{2.65 \times 85 \times 19.25 \times 50 \times .90}$$

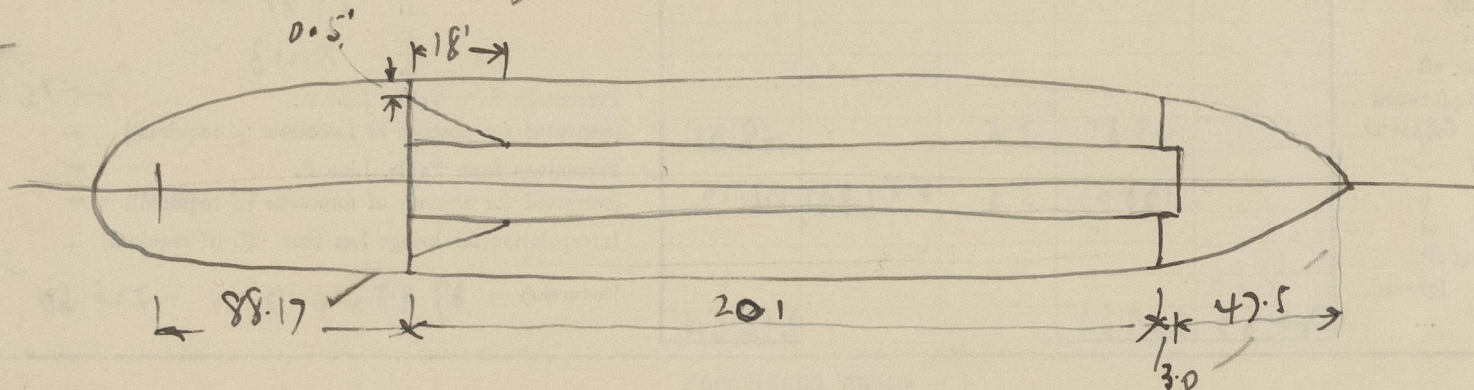
$$C_b = \frac{6390 \times 35}{339.67 \times 85 \times 19.25 \times 50} = .805$$

$$\text{Depth } (85'-6") + (2'-8") = 88'-2"$$

$$\text{Trunk } 32 \times 6 = 192$$

$$\begin{array}{r} 192 \\ + 8 \\ + 4 \\ \hline 204 \end{array}$$

$$\begin{array}{r} 16-6 \\ 61-6 \\ 7-6 \\ 2-8 \\ \hline 88-2 \end{array}$$



$$\begin{array}{r} \text{Forecastle } 47.5 \\ \text{Side extension } 3 \times 6.3 = 18.9 \\ \text{Equino } 22.3 \\ \hline 48.35 \end{array}$$

$$\begin{array}{r} 50.5 \\ 48.35 \\ \hline 2.15 \\ + 201 \\ \hline 203.15 \end{array}$$

Trunk

$$18 \times 32 + 49 = 14.58$$

$$185.15 \times 32 = 118.50$$

$$\hline 153.08$$

$$\begin{array}{r} 88.17 \\ 201.50 \\ 3.00 \\ 47.50 \\ \hline 339.67 \end{array}$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



© 2020

Lloyd's Register
Foundation