

Fort Amherst
34614

B.T. COPY
(See Corres)

Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

Index No. 34789
(For London Office only.)

14 DEC 1935

GLASGOW REPORT No 56433

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having a complete superstructure without tonnage opening

(Type of Superstructures.)

Ship's Name FORT AMHERST	Nationality and Port of Registry Antwerp London	Official Number 164573	Gross Tonnage 3489	Date of Build 1936-1
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Moulded Dimensions: Length **310'-0"** Breadth **45'-0"** Depth **27'-1" to 4.0"**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **23.02 = 6030** tons

Coefficient of fineness for use with Tables **.657**

Port of Survey Glasgow

Date of Survey 12th Dec 1935

Name of Surveyor J. G. Thomson

Particulars of Classification +100A1 with freeboard (class uncompleted).

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... 27.08	(a) Where D is greater than Table depth (D - Table depth) R = 15.35 $(27.11 - 20.67) \times 2.384 = +6.29$	Moulded Breadth (B) 45'
Stringer plate ... 27.34 1.03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 6.44	Standard Round of Beam = $\frac{B \times 12}{50} = 10.8$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = 6" upper D2
Depth for Freeboard (D) = 27.11		Difference = 4.8
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{4.8}{4} \times .20 = +.24$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S)	Height	Height Correction	Effective Length (E)
Poop enclosed ... 201.5	201.5	8.0	-	201.5
" overhang ...		+2.1		
R.Q.D. enclosed ...				
" overhang ...				
Bridge enclosed ... 46.5	46.5	8.0	-	46.5
" overhang aft ...		+2.1		
" overhang forward ...				
F'cle enclosed ...				
" overhang ...				
Trunk aft ...				
" forward ...				
Tonnage opening aft ...				
" " forward ...				
Total ... 248.0	248.0			248.0

Standard Height of Superstructure **6.60**

" " R.Q.D.

Deduction for complete superstructure **36.1**

Percentage covered $\frac{S}{L} = 80.0$

" " $\frac{S_1}{L} = 80.0$

" " $\frac{E}{L} = 80.0$

Percentage from Table, Line A. **75.3**

(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 = $36 \times 75.3 = -27.11$

UPPER DECK SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	41.00	1	1	41.00	41.32	60.32	1	1	60.32
1/4 L from A.P. ...	18.245	4	4	72.98	18.2	26.84	4	4	107.36
1/2 L " ...	4.51	2	2	9.02	4.5	6.64	2	2	13.28
Amidships ...	-	4	4	-	-	-	4	4	-
3/4 L from F.P. ...	9.02	2	2	18.04	10	10.00	2	2	20.00
1/4 L " ...	36.49	4	4	145.96	37.4	39.75	4	4	159.00
F.P. ...	82.00	1	1	82.00	82.2	92.50	1	1	92.50
Total ...	36.9	18	18	369.00			18	18	452.46

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{83.46}{18} \left(.75 - \frac{40}{35} \right) = -1.62$

If limited on account of midship superstructure.

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

Mean actual sheer aft = Even

Mean standard sheer aft

Mean actual sheer forward = Even

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = **> .1 L**

" " aft of " = **> .1 L**

Actual height of superstructure = **8.21 feet**

Standard " = **6.60**

$\frac{8.21 - 6.60}{1.61} = 19.32$

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Fresh Deck (if required)	45.90
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line 18276	Correction for coefficient	Nil.
Depth to Freeboard Deck = 27.419	$\Delta = 4.671$	Depth Correction ... 15.35	
Summer freeboard = 18.485	Tons per inch immersion at summer load water line	Deduction for superstructures ... 27.11	
Moulded draught (d) = 18.63	T = 25.33	Sheer correction ... 1.62	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.66 = 4 3/4	Deduction = $\frac{\Delta}{40T}$ inches = 4.61	Round of Beam correction ... 0.24	
Addition for Winter North Atlantic Freeboard (if required) = 6 3/4	$d/4 = 4 3/4$	Correction for Thickness of Deck amidships ... 1.00	
		Other corrections, scantlings, etc. 68.99	
		15' forward summer moulded draught 18-7 1/2	
		85.58	
		Summer Freeboard = 101.75	
		102.75	

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

Tropical Fresh Water Line above Centre of Disc ... 9 1/2	Tropical Fresh Water Freeboard ... 8'-5 3/4 6 3/4	8'-6 3/4
Fresh Water Line " " ... 4 3/4	Fresh Water " " ... 7'-8 1/4 9 1/4	7'-9 1/4
Tropical Line " " ... 4 3/4	Tropical " " ... 8'-1 2	8'-2
Winter Line below " " ... 4 3/4	Winter " " ... 8'-1 1/2	8'-2 1/2
Winter North Atlantic Line " " ... 6 3/4	Winter North Atlantic " " ... 9'-0 1/2 11 1/2	8'-11 1/2

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