

LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name FORT AMHERST.	Official Number 164573.	Nationality and Port of Registry BRITISH.	Gross Tonnage	Date of Build 1/1936.	Port of Survey Glasgow.
Moulded Dimensions: Length 310.0' Breadth 45.0' Depth 27.08'					Date of Survey 1.7.52.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 6030. tons (excluding bossing)					Surveyor's Signature _____
Coefficient of fineness for use with Tables (.657 Actual) .68 Min.					Particulars of Classification 100A1 with freeboard.

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 = (27.11 - 20.67) 2.384 = +15.35"	Moulded Breadth (B) 45.0'
Stringer plate .3403.	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 6.44	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{45.0 \times 12}{50} = 10.8$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ —	If restricted by superstructures ✓	Ship's Round of Beam = 6.
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 ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed	201.50.	201.50.	8.21.	✓	201.50.	Standard Height of Superstructure 6.60.
" overhang						" " R.Q.D. ✓
R.Q.D. enclosed						Deduction for complete superstructure 36.00"
" overhang						Percentage covered $\frac{S}{L} =$
Bridge enclosed						" " $\frac{S_1}{L} =$ 80.00.
" overhang aft						" " $\frac{E}{L} =$
" overhang forward						Percentage from Table, Line A. 75.3.
Fore enclosed	46.50.	46.50.	8.21.	✓	46.50.	(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B. —
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than .2L (if required) ✓
Tonnage opening aft						Deduction = 36.753 = -27.11.
" " forward						
Total	248.00	248.00.			248.00.	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	41.00.	1		41.00.	+19.32.	41.0.	1		60.32.
$\frac{1}{2}$ L from A.P.	18.245.	4		72.98.	18.5.	26.84.	4		107.36.
$\frac{2}{3}$ L "	4.51.	2		9.02.	4.5.	6.64.	2		13.28.
Amidships	—	4		—	✓	✓	4		✓
$\frac{2}{3}$ L from F.P.	9.02.	2		18.04.	10.0.	10.00.	2		20.00.
$\frac{1}{2}$ L "	36.49.	4		145.96.	39.75.	39.75.	4		159.00.
F.P.	82.00.	1		82.00.	92.50.	92.50.	1		92.50.
Total				369.00.					452.46.

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{83.46}{18} = 4.636$
If limited on account of midship superstructure.

$\left(.75 - \frac{S}{2L} \right) = \frac{83.46}{18} \left(.75 - \frac{40}{35} \right) = -1.62"$
If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Mean actual sheer aft =
Mean standard sheer aft =

Mean actual sheer forward =
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **2.1L**

" " aft of " = **7.1L.**

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **27.11.**
Summer freeboard = **6.44**
Moulded draught (d) = **20.67**
Keel allowance = **—**

Extreme draught = **—**
Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **5.17 = 5'4"**

Addition for Winter North Atlantic Freeboard (if required) = **7'4"**

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

$d/4 = 5'4"$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **M.L.**

Depth Correction **15.35**
Deduction for superstructures **✓**
Sheer correction **✓**
Round of Beam correction **.24.**
Correction for Thickness of Deck amidships **✓**
Other corrections, scantlings, etc. to summer load draught. **44.49**
20.68

	+	-
Depth Correction	15.35	
Deduction for superstructures	✓	27.11
Sheer correction	✓	1.62
Round of Beam correction	.24.	
Correction for Thickness of Deck amidships	✓	
Other corrections, scantlings, etc.	44.49	
to a summer load draught.	60.08	28.73

Summer Freeboard = **77.25.**

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

Tropical Fresh Water Line above Centre of Disc ... **10 1/2"**
Fresh Water Line " " ... **5 1/4"**
Tropical Line " " ... **5 1/4"**
Winter Line below " " ... **5 1/4"**
Winter North Atlantic Line " " ... **7 1/4"**

Tropical Fresh Water Freeboard **6' 5 1/4"**
Fresh Water " **5' 6 3/4"**
Tropical " **6' 0"**
Winter " **6' 10 1/2"**
Winter North Atlantic " **7' 0 1/2"**