

COMPUTATION OF FREEBOARD FOR SERVICE GREAT LAKES TO NEWFOUNDLAND AND BOSTON

Lloyd's Register of Shipping.

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(For London Office only).

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **INSPIRATION** Official Number **623** Nationality and Port of Registry **Colombian** Date of Build **1920**
Panama Bluefields Port of Survey **New Orleans**
 Date of Survey **4th February 1939**
 Surveyor's Signature **A.W. Murray**
 Moulded Dimensions: Length **184.00'** Breadth **25.30'** Depth **18.33'**
 Moulded displacement at moulded draught = 85 per cent. of moulded depth
 Efficient of fineness for use with Tables **72**
 Particulars of Classification **A.1. with freeboard. Service Gulf of Mexico and Caribbean Sea or Great Lakes, Newfoundland and up to Boston.**

Depth for Freeboard (D).
 Moulded depth ... **18.33**
 Upper plate ... **.03**
 Nothing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
 Depth for Freeboard (D) = **18.36**
 Depth correction.
 (a) Where D is greater than Table depth
 (D - Table depth) R = **(18.36 - 12.27) 1.415 = + 8.62**
 (b) Where D is less than Table depth (if allowed)
 (Table depth - D) R = **6.09**
 If restricted by superstructures **✓**
 Round of Beam correction.
 Moulded Breadth (B) **25.30**
 Standard Round of Beam = $\frac{B \times 12}{50} =$ **6.07**
 Ship's Round of Beam = **5.75**
 Difference = **.32 Deficient**
 Restricted to
 Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.32}{4} \times .9367 = +.07$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Superstructure enclosed ...	11.75	11.75	3.75	3.75/6.00	7.34
Overhang ...					
Q.D. enclosed ...					
Overhang ...					
Edge enclosed ...					
Overhang aft ...					
Overhang forward ...					
Enclosed ...					
Overhang ...					
Deck aft ...					
Forward ...					
Bridge opening aft ...					
Forward ...					
Total ...	11.75	11.75			7.34

Standard Height of Superstructure **6.00'**
 " " R.Q.D. **✓**
 Deduction for complete superstructure **24.40"**
 Percentage covered $\frac{S}{L} =$ **6.39**
 " " $\frac{S_1}{L} =$ **6.39**
 " " $\frac{E}{L} =$ **3.99**
 Percentage from Table, Line A. **nil**
 (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 = **nil**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
... ..	28.40	1		28.40	8.50	8.50	1		8.50
m A.P. ...	12.64	4		50.56	3.50	3.50	4		14.00
" ...	3.12	2		6.24	.75	.75	2		1.50
hips ...	-	4		-	-	-	4		-
n F.P. ...	6.25	2		12.50	3.50	3.50	2		7.00
" ...	25.28	4		101.12	13.00	13.00	4		52.00
" ...	56.80	1		56.80	26.00	26.00	1		26.00
Total ...				255.62					109.00

Mean actual sheer aft = **Deficient**
 Mean standard sheer aft
 Mean actual sheer forward = **Deficient**
 Mean standard sheer forward
 Length of enclosed superstructure forward of amidships = **Deficient**
 " " aft of " = **Sheel.**
 Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{146.62}{18} (.75 - .0320) = + 5.85$
 If limited on account of midship superstructure. **✓**
 If limited to maximum allowance of 1 1/2 ins. per 100 ft. **✓**

Correction for Tropical Freeboard.
 Correction for Winter and Winter North Atlantic Freeboard.
 Depth to Freeboard Deck = **18.36**
 Summer freeboard = **5.39**
 Moulded draught (d) = **12.92**
 Tropical freeboard and addition for
 Freeboard = $\frac{d}{4}$ inches = **3.24 = 3 1/4**
 Winter North Atlantic Freeboard (if
 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
 $\frac{1}{4} = 3 1/4$
 TABULAR FREEBOARD
 Correction for coefficient $\frac{.72 + .68}{1.36} = \frac{1.40}{1.36}$
 Depth Correction ... **8.62**
 Deduction for superstructures ... **5.85**
 Sheer correction ... **.07**
 Round of Beam correction ... **27.51**
 Correction for Thickness of Deck amidships
 TO CORRESPOND TO AN APPROVED SUMMER EXTREME
 Other corrections, scantlings **13'-0"**
 22.10
 22.75
 42.05
 Summer Freeboard = **64.80**

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

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

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