

Timber Freeboards

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. _____
(For London Office only.)

Ship's Name EMPIRE BERMUDA.	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 312.57 Breadth 46.33' Depth 24.75					Date of Survey 3.6.49
Moulded displacement at moulded draught = 85 per cent. of moulded depth 6625 tons					Surveyor's Signature
Coefficient of fineness for use with Tables .761					Particulars of Classification +100 A1 W. f. b. d.

DEPTH FOR FREEBOARD (D).

Moulded depth	24.75
Stringer plate05
Sheathing on exposed deck	$T \left(\frac{L-S}{L} \right) =$			
Depth for Freeboard (D) =	24.80			

DEPTH CORRECTION.

(a) Where D is greater than Table depth (D-Table depth) R = **+9.52'**

(b) Where D is less than Table depth (if allowed) (Table depth-D) R =

If restricted by superstructures

ROUND OF BEAM CORRECTION.

Moulded Breadth (B)	
Standard Round of Beam = $\frac{B \times 12}{50}$	=
Ship's Round of Beam	=
Difference	
Restricted to	
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	= +0.01

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	80.58				
" overhang					
R.Q.D. enclosed	117.60				
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
F'cle enclosed	27.25				
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	224.83				

Standard Height of Superstructure	6.62
" " R.Q.D.	
Deduction for complete superstructure	36.17
Percentage covered $\frac{S}{L} =$	71.93
" " $\frac{S_1}{L} =$	
" " $\frac{E}{L} =$	
Percentage from Table, Line A <i>Timber</i>	82.66
(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 =	36.17 x .8266 = -29.90

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	...	1					1		
$\frac{1}{2}L$ from A.P.	...	4					4		
$\frac{2}{3}L$ "	...	2					2		
Amidships	...	4					4		
$\frac{2}{3}L$ from F.P.	...	2					2		
$\frac{1}{2}L$ "	...	4					4		
F.P.	...	1					1		
Total	...								

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \mathbf{+2.42}$

If limited on account of midship superstructure.

Mean actual sheer aft =
Mean standard sheer aft =

Mean actual sheer forward =
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =
" " aft of " =

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

EMPIRE Depth to Freeboard Deck = **29.62**
Summer freeboard = **8.39**
Moulded draught (d) = **21.23**

EMPIRE Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **5.31 = 5 1/4"**

EMPIRE Addition for Winter North Atlantic Freeboard (if required) = $\frac{d}{3} = 7.07 = 7"$

Deduction for Fresh Water.

Displacement in salt water at summer load water line $\Delta =$ **6629**
Tons per inch immersion at summer load water line $T =$ **29.1**

Deduction = $\frac{\Delta}{40 T}$ inches = **5.69**
= **5 3/4"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	9.52	
Deduction for superstructures		29.90
Sheer correction	2.42	
Round of Beam correction	.01	
Correction for Thickness of Deck amidships	57.84	
Other corrections, scantlings, etc.	11.54	
	81.33	29.90
Summer Freeboard =	100.75	

46.54
49.32

AR.
3.6.49

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

Tropical Fresh Water Line above Centre of Disc	17 1/4"
Fresh Water Line	12 1/4"
Tropical Line	11 1/2"
Winter Line below	3 1/4"
Winter North Atlantic Line	7 1/4"
Summer	6 1/4"

EMPIRE Tropical Fresh Water Freeboard **71.434"**
Fresh Water " **71.11"**
Tropical " **71.11 1/2"**
Winter " **81.134"**
Winter North Atlantic " **91.614"**