

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

TOWERS GRANGE
37874

Ship's Name EPSOM	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 425.30 Breadth 56.00 Depth 28.67					Date of Survey
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature
Coefficient of fineness for use with Tables .759					Particulars of Classification

DEPTH FOR FREEBOARD (D).

Moulded depth **28.67**

Stringer plate **.03**

Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) = **28.70**

DEPTH CORRECTION.

(a) Where D is greater than Table depth
(D-Table depth) R = **(28.70-28.35) 3 = +1.05**

(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) **56.00**

Standard Round of Beam = $\frac{B \times 12}{50} =$ **13.44**

Ship's Round of Beam = **14.06**

Difference **+ .56**

Restricted to

Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.56^2}{4} \times 0.059 = \text{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	33.75	33.75	9.00	✓	33.75
" overhang29	.14			.14
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft	386.39	386.39	9.00	✓	386.39
" overhang forward					
Fore enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft	4.87	2.51	1/2 LIFE		2.51
" " forward					
Total	425.30	422.79			422.79

Standard Height of Superstructure **7.5**

 " " R.Q.D. **✓**

Deduction for complete superstructure **42**

Percentage covered $\frac{S}{L} =$ **1.00**

 " " $\frac{S_1}{L} =$ **99.41**

 " " $\frac{E}{L} =$ **99.27**

Percentage from Table, Line A & B **99.27**
(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 = **42 x .9927 = - 41.70**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.		1			32.25	50.25	1		50.25
1/2 L from A.P.		4			.125	18.125	4		72.50
1/4 L "		2			-	5.53	2		11.06
Amidships		4			-	-	4		-
1/2 L from F.P.		2			-	10.89	2		21.78
1/4 L "		4			6.50	24.50	4		98.00
F.P.		1			81	99.00	1		99.00
Total									352.59

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{120.20}{18} \times .25 = +1.67$

If limited on account of midship superstructure.

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

Actual tween deck 9.00
Hd " " 7.50
1.50
Deficient Ends = 18"

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.

Depth to Freeboard Deck = **28.70**

Summer freeboard = **3.75**

Moulded draught (d) = **24.95**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **6 1/4**

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 = **6 1/4**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient			
Depth Correction	1.05	-	
Deduction for superstructures	-	41.70	
Sheer correction	1.67	-	
Round of Beam correction	-	-	
Correction for Thickness of Deck amidships	-	-	
Other corrections, scantlings, etc.	-	-	
Total	2.72	41.70	- 38.98
Summer Freeboard	= 45.98		

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

Tropical Fresh Water Line above Centre of Disc	...	13	Tropical Fresh Water Freeboard	...	13
Fresh Water Line	"	6 1/4	Fresh Water	"	6 1/4
Tropical Line	"	6 1/4	Tropical	"	6 1/4
Winter Line	below	6 1/4	Winter	"	6 1/4
Winter North Atlantic Line	"	6 1/4	Winter North Atlantic	"	6 1/4

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