

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

 Index No. **34421**
 (For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Port of Survey

(Type of Superstructures.)

Date of Survey **1. 1. 34**

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
John Brown & Co. No 541			43.83	10 upper dk
Moulded Dimensions: Length 492	Breadth 65.00	Depth 35.25	19435	10 lower dk
Moulded displacement at moulded draught = 85 per cent. of moulded depth				
Coefficient of fineness for use with Tables .710				

Name of Surveyor

Particulars of Classification

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth ...	35.25	(a) Where D is greater than Table depth (D-Table depth) R = (35.29 - 32.80) 3.00		Moulded Breadth (B)	65.00
Stringer plate04	2.49 = + 7.47		Standard Round of Beam = $\frac{B \times 12}{50}$	15.60
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	16.25
Depth for Freeboard (D) =	35.29	If restricted by superstructures		Difference	.65" excess
				Restricted to	
				Correction = $\frac{\text{Diff}^o}{4} \times \left(1 - \frac{S_1}{L} \right)$	= .65 x .0055 = N/L

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	115.04	115.04	8'-7"		115.04	Standard Height of Superstructure 7'-6"
" overhang ...						" " R.Q.D.
R.Q.D. enclosed ...						Deduction for complete superstructure 42.00
" overhang ...						Percentage covered $\frac{S}{L} = 100\%$
Bridge enclosed...	371.46	371.46	8'-7"		371.46	" $\frac{S_1}{L} = 99.45\%$
" overhang aft ...						" $\frac{E}{L} = 99.45\%$
" overhang forward						Percentage from Table, Line A.
Fore enclosed ...						(corrected for absence of forecastle (if required)) 99.32%
" 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 ...	5.50	2.75			2.75	Deduction = 42 x .9932 = - 41.71"
" " forward						
Total ...	492.00	489.25			489.25	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	59.20	1		59.20	55.50	68.46	1		68.46	Mean actual sheer aft = Excess
$\frac{1}{8}L$ from A.P. ...	26.34	4		105.36	24.60	30.46	4		121.84	Mean actual sheer forward = Excess
$\frac{2}{8}L$ " ...	6.51	2		13.02	6.12	7.53	2		15.06	Mean standard sheer forward = Excess
Amidships ...		4					4			Length of enclosed superstructure forward of amidships =
$\frac{3}{8}L$ from F.P. ...	13.02	2		26.04	12.24	13.63	2		27.26	" " aft of " =
$\frac{4}{8}L$ " ...	52.68	4		210.72	49.20	55.15	4		220.60	
F.P. ...	118.40	1		118.40	111.00	123.96	1		123.96	
Total ...				532.74	+12.96				577.18	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{44.28}{18} (.75 - .50) = -.62"$$

If limited on account of midship superstructure.

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.

Depth to Freeboard Deck	=	35.29
Summer freeboard	=	5.60
Moulded draught (d)	=	29.69

Deduction for Tropical freeboard and addition for

$$\text{Winter freeboard} = \frac{d}{4} \text{ inches} = \frac{29.69}{4} = 7.42$$

Addition for Winter North Atlantic Freeboard (if required)=

Deduction for Fresh Water.

Displacement in salt water at summer load water line	$\Delta =$	19530
Tons per inch immersion at summer load water line	T =	62.75
Deduction = $\frac{\Delta}{40T}$ inches		7 $\frac{3}{4}$"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction	...	7.47
Deduction for superstructures	...	41.71
Sheer correction62
Round of Beam correction	...	
Correction for Thickness of Deck amidships	...	
Other corrections, scantlings, etc.	...	

Summer Freeboard = **67.25**

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

Tropical Fresh Water Line above Centre of Disc	...	14 $\frac{3}{4}$" 15 $\frac{1}{4}$"	Tropical Fresh Water Freeboard	...	4' - 4 $\frac{1}{2}$"
Fresh Water Line	"	7 $\frac{3}{4}$"	Fresh Water	"	4' - 11 $\frac{1}{2}$"
Tropical Line	"	7 $\frac{1}{2}$"	Tropical	"	5' - 0 $\frac{1}{2}$" 4' - 11 $\frac{3}{4}$"
Winter Line below	"	7 $\frac{1}{2}$"	Winter	"	6' - 2 $\frac{1}{4}$"
Winter North Atlantic Line	"		Winter North Atlantic	"	