

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tug					Port of Survey Falmouth
having					Date of Survey 25.24/4/32, 3.5/10/32
(Type of Superstructures.)					Name of Surveyor R. Moffitt
Ship's Name KENT	Nationality and Port of Registry British London	Official Number 142611	Gross Tonnage 8694	Date of Build 1918 - C.	Particulars of Classification +100. A.1 Shells & with freeboard
Moulded Dimensions: Length 460' Breadth 62.5' Depth 34.45' to Shutter					
Moulded displacement at moulded draught = 85 per cent. of moulded depth 20450 tons					
Coefficient of fineness for use with Tables .776					

Depth for Freeboard (D) Moulded depth ... 34.45' Stringer plate04 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 34.49	Depth correction (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(34.49 - 30.64) 3 = + 2.36$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ If restricted by superstructures	Round of Beam correction Moulded Breadth (B) 62.5 Standard Round of Beam = $\frac{B \times 12}{50} = 15.00$ Ship's Round of Beam = $\frac{13.00}{2}$ Difference Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2}{4} \times .2958 = + .15$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	245.0	245.0	8.0'	-	245.0'
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	48.11	48.92	8.0'	-	48.92
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	323.92	323.92			323.92

Standard Height of Superstructure **4.5'**

" " R.Q.D. **42.0"**

Deduction for complete superstructure

Percentage covered $\frac{S}{L} = 40.42$

" " $\frac{S_1}{L} = 40.42$

" " $\frac{E}{L} = 40.42$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **63.51**
(corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required)

Deduction = **- 26.68**

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	56.00	1	56.00	42.00	42.00	1	42.00
$\frac{1}{2}$ L from A.P. ...	24.92	4	99.68	18.14	18.17	4	72.68
$\frac{3}{4}$ L " ...	6.16	2	12.32	4.54	4.54	2	9.08
Amidships ...	-	4	-	-	-	4	-
$\frac{3}{4}$ L from F.P. ...	12.32	2	24.64	11.06	11.06	2	22.12
$\frac{1}{2}$ L " ...	49.84	4	199.36	44.24	44.24	4	176.96
F.P. ...	112.00	1	112.00	102.00	102.00	1	102.00
Total ...			504.00				424.84

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 = **.300**
 " " aft of " = **.298**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{49.16}{18} (.75 - .3521) = + 1.75$

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.

Ft.
 Depth to Freeboard Deck = **34.49**
 Summer freeboard = **7.44**
 Moulded draught (d) = **30.02**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **7.5 = 7.2**
 Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 19085$
 Tons per inch immersion at summer load water line
 $T = 60.14$

Deduction = $\frac{\Delta}{40 T}$ inches
 = **7.92**
 = **8"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	$\frac{.776 + .68}{1.36} = \frac{1.456}{1.36}$	
	$\frac{1.456}{1.36}$	
Depth Correction ...	21.36	-
Deduction for superstructures ...	- 26.68	
Sheer correction ...	1.75	-
Round of Beam correction15	-
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	23.26	26.68

Summer Freeboard = **93.13**

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

Tropical Fresh Water Line above Centre of Disc ...	15.2
Fresh Water Line " " ...	8
Tropical Line " " ...	7.2
Winter Line below " " ...	7.2
Winter North Atlantic Line " " ...	7.2

Tropical Fresh Water Freeboard ...	4.94
Fresh Water " " ...	6.54
Tropical " " ...	4.14
Winter " " ...	4.14
Winter North Atlantic " " ...	8.44