

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

R.

Ship's Name KEYNOR	Official Number 133558	Nationality and Port of Registry BRITISH MONTREAL	Gross Tonnage 1806	Date of Build 1914 6ms.	Port of Survey _____
Moulded Dimensions: Length 250.00 Breadth 42.33 Depth 20.00					Date of Survey 26.8.48
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature <i>[Signature]</i>
Coefficient of fineness for use with Tables .840 (estimated)					Particulars of Classification +100A1

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 20.00	(a) Where D is greater than Table depth (D-Table depth) R = (20.05 - 16.67) 1.923 = +6.50"	Moulded Breadth (B) 42.33
Stringer plate05	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓	Standard Round of Beam = $\frac{B \times 12}{50} = 10.16$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 10.50
Depth for Freeboard (D) = 20.05		Difference .34
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.34}{4} \times .84 = -.07"$

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					
" overhang aft					
" overhang forward					
F'cle enclosed	40.00	40.00	5.00	5.00	33.33
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	40.00	40.00			33.33

Standard Height of Superstructure **6.00'**

" " R.Q.D. **✓**

Deduction for complete superstructure **31.00**

Percentage covered $\frac{S}{L} = 16.00$

" " $\frac{S_1}{L} = 16.00$

" " $\frac{E}{L} = 13.33$

Percentage from Table, Line A. **6.67**
(corrected for absence of fore-castle (if required))

Percentage from Table, Line B.
(corrected for absence of fore-castle (if required))

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

Deduction = **31.00 × .0667 = 2.07"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	35.00	1	35.00	27.00	27.00	1	27.00	27.00	
$\frac{1}{2}L$ from A.P.	15.575	4	62.30	11.25	11.25	4	45.00	45.00	
$\frac{2}{3}L$ „	3.85	2	7.70	2.50	2.50	2	5.00	5.00	
Amidships	—	4	—	—	—	4	—	—	
$\frac{2}{3}L$ from F.P.	7.70	2	15.40	7.25	7.25	2	14.50	14.50	
$\frac{1}{2}L$ „	31.15	4	124.60	25.40	25.40	4	101.60	101.60	
F.P.	70.00	1	70.00	54.00	54.00	1	54.00	54.00	
Total			315.00					247.10	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{67.90}{18} (.75 - .08) = +2.53"$

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 = **20.05**

Summer freeboard = **3.58**

Moulded draught (d) = **16.47**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **4.12 = 4"**

Addition for Winter North Atlantic Freeboard (if required) = **6"**

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

$\frac{4}{4} = 4"$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.84 + .68}{1.36} = \frac{1.52}{1.36}$

	+	-
Depth Correction	6.50	
Deduction for superstructures		2.07
Sheer correction	2.53	
Round of Beam correction07
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	9.03	2.14
Summer Freeboard =	42.99	

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

Tropical Fresh Water Line above Centre of Disc	...	8	...
Fresh Water Line	"	4	...
Tropical Line	"	4	...
Winter Line below	"	4	...
Winter North Atlantic Line	"	6	...

Tropical Fresh Water Freeboard	...	3.7
Fresh Water	"	3.3
Tropical	"	3.3
Winter	"	3.1
Winter North Atlantic	"	3.1