

AS TANKER
Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Index. No. _____
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having geometric freeboard
as Tanker (see preliminary sheet)
(Type of Superstructures.)

Port of Survey _____
Date of Survey 23-6-32
Name of Surveyor _____
Particulars of Classification _____

Ship's Name SIR JAMES CLARK ROSS Nationality and Port of Registry _____ Official Number _____ Gross Tonnage _____ Date of Build _____

Dimensions: Length 535.25 Breadth 74.0 Depth 48.75
displacement at moulded draught = 85 per cent. of moulded depth 39,700 tons
of fineness for use with Tables .846 see preliminary

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = (49.01 - 35.68) x 3 = +39.99

(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) 74
Standard Round of Beam = $\frac{B \times 12}{50} = \frac{74 \times 12}{50} = 17.76$
Ship's Round of Beam = 6.00
Difference 11.76
Restricted to $\frac{11.76}{4} \times .9996 = 2.93$
Correction = $\frac{\text{Diff}^2}{4} \times (1 - \frac{S_1}{L}) = \frac{11.76^2}{4} \times (1 - \frac{14.03}{107.25}) = +2.35$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Loop enclosed ...					
„ overhang ...					
R.Q.D. enclosed					
„ overhang					
Bridge enclosed...					
„ overhang aft					
„ overhang forward					
F'cle enclosed ...	<u>105.75</u>	<u>105.75</u>	<u>8'</u>	<u>-</u>	<u>105.75</u>
„ overhang ...	<u>3.00</u>	<u>1.50</u>			<u>1.50</u>
Trunk aft					
„ forward					
Tonnage opening aft					
„ forward					
Total ...	<u>108.75</u>	<u>107.25</u>			<u>107.25</u>

Standard Height of Superstructure 7.50
„ „ R.Q.D. _____
Deduction for complete superstructure 42.00
Percentage covered $\frac{S}{L} = \frac{20.32}{107.25} = 20.32\%$ (see "Vikings")
„ „ $\frac{S_1}{L} = \frac{20.04}{107.25} = 20.04\%$ As standard ship with 40% E/L
„ „ $\frac{E}{L} = \frac{20.04}{107.25} = 20.04\%$
Percentage from Table, Line A. _____
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. Tanker 14.03 31.00
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required) _____
Deduction = 42.00 x 14.03 = -5.89 13.02

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>63.52</u>	<u>1</u>			<u>3.75</u>	<u>3.75</u>	<u>1</u>		<u>3.75</u>
$\frac{1}{8}$ L from A.P. ...		<u>4</u>					<u>4</u>		
$\frac{2}{8}$ L „ ...		<u>2</u>					<u>2</u>		
Amidships ...		<u>4</u>					<u>4</u>		
$\frac{3}{8}$ L from F.P. ...		<u>2</u>					<u>2</u>		
$\frac{1}{8}$ L „ ...		<u>4</u>					<u>4</u>		
F.P. ...		<u>1</u>			<u>35.75</u>	<u>35.75</u>	<u>1</u>		<u>35.75</u>
Total ...				<u>571.68</u>					<u>39.50</u>

Mean actual sheer aft = _____
Mean standard sheer aft = _____ } Deficient
Mean actual sheer forward = _____
Mean standard sheer forward = _____
Length of enclosed superstructure forward of amidships = _____
„ „ aft of „ = _____ } Tanker
Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{532.18}{18} = 29.56$ (75 - 1016) = +19.17
If limited on account of midship superstructure. _____
If limited to maximum allowance of 1 1/2 ins. per 100 ft. _____

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

Depth to Freeboard Deck = 49.06 Ft.
Summer freeboard = 13.73
Moulded draught (d) = 35.33

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 8.83 8 3/4

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 = _____

TABULAR FREEBOARD corrected for Flush Deck (if required)

	Correction for coefficient	Depth Correction	Deduction for superstructures	Sheer correction	Round of Beam correction	Correction for Thickness of Deck amidships	Other corrections, scantlings, etc.
	<u>846 + 68</u> <u>1.36</u>	<u>39.99</u>	<u>5.89</u>	<u>19.17</u>	<u>2.35</u>	<u>.60</u>	<u>1.50</u>
							<u>44.44</u>
							<u>57.72</u>
							<u>164.87</u>

Summer Freeboard = 164.87

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

Tropical Fresh Water Line above Centre of Disc	...	...	...	...
Fresh Water Line	„	„	...	...
Tropical Line	„	„	...	...
Winter Line	below	„	...	...
Winter North Atlantic Line	„	„	...	...

Tropical Fresh Water Freeboard ...
Fresh Water ...
Tropical ...
Winter ...
Winter North Atlantic ...