

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Roofs & Forecastle
(Type of Superstructures.)
Port of Survey _____
Date of Survey 2-8-32
Name of Surveyor _____
Particulars of Classification _____
Ship's Name SIR JAMES CLARK ROSS. Nationality and Port of Registry Norwegian Sandefjord. Official Number _____ Gross Tonnage 14362 Date of Build 1930/8
Moulded Dimensions: Length 535.25 Breadth 74 Depth 48.75
Moulded displacement at moulded draught = 85 per cent. of moulded depth 39700 tons
Coefficient of fineness for use with Tables .846

Depth for Freeboard (D) Moulded depth 48.75
Ringer plate06
Bathing on exposed deck
 $T \left(\frac{L-S}{L} \right) = .25 \times 7936$.20
Depth for Freeboard (D) = 49.01
Depth correction
(a) Where D is greater than Table depth (D-Table depth) R = 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) _____
Standard Round of Beam = $\frac{B \times 12}{50} =$ _____
Ship's Round of Beam = _____
Difference _____
Restricted to _____
Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) = +2.34$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed						Standard Height of Superstructure <u>7.5</u>
„ overhang						„ „ R.Q.D. _____
R.Q.D. enclosed						Deduction for complete superstructure <u>42.00</u>
„ overhang						Percentage covered $\frac{S}{L} = 20.64$
Bridge enclosed... ..						„ „ $\frac{S_1}{L} = 20.36$
„ overhang aft						„ „ $\frac{E}{L} = 20.36$
„ overhang forward						Percentage from Table, Line A. <u>10.18</u>
F'cle enclosed	<u>107.5</u>	<u>107.5</u>	<u>8.0</u>		<u>107.5</u>	(corrected for absence of forecastle (if required))
„ overhang	<u>3.0</u>	<u>1.5</u>			<u>1.5</u>	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						Deduction = <u>- 4.28</u>
„ „ forward						
Total	<u>110.5</u>	<u>109.0</u>			<u>109.0</u>	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
P.		1				1		Mean actual sheer aft =
L from A.P.		4				4		Mean standard sheer aft =
L „		2				2		Mean actual sheer forward =
Midships		4				4		Mean standard sheer forward =
L from F.P.		2				2		Length of enclosed superstructure forward of amidships =
L „		4				4		„ „ aft of „ =
P.		1				1		
Total								

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = +19.12$

If limited on account of midship superstructure. If limited to maximum allowance of 1½ 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 = 15.44
Moulded draught (d) = 33.62
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 8.40 = 213 mm
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 $\frac{.846 + .68}{1.36} = \frac{1.526}{1.36} = 1.123$
Depth Correction 39.99 -
Deduction for superstructures - 4.28
Sheer correction 19.12 -
Round of Beam correction - 2.34 -
Correction for Thickness of Deck amidships60
Other corrections, scantlings, etc. 1.50
Loss of buoyancy at midship 63.55
Summer Freeboard = 185.34

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

Tropical Fresh Water Line above Centre of Disc	Tropical Fresh Water Freeboard
Fresh Water Line „ „	Fresh Water „ „
Tropical Line „ „	Tropical „ „
Winter Line below „ „ <u>8.40</u> = <u>213 mm</u>	Winter „ „
Winter North Atlantic Line „ „	Winter North Atlantic „ „