

Amended freeboard

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **33405**
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker <i>Whaling Factory</i>				
having <i>Forecastle only</i>				
(Type of Superstructures.)				
Ship's Name SIR JAMES CLARK ROSS		Nationality and Port of Registry <i>Norwegian Sandefjord</i>	Official Number 14362	Date of Build 1930-8
Moulded Dimensions: Length 535.25		Breadth 74.0	Depth 48.75	
Moulded displacement at moulded draught = 85 per cent. of moulded depth		39700 tons		
Coefficient of fineness for use with Tables		.846		
Port of Survey				
Date of Survey				
Name of Surveyor				
Particulars of Classification <i>+100 A1 with fld "Whaling Service" "Carrying Petroleum in Bulk."</i>				

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth 48.75	(a) Where D is greater than Table depth (D-Table depth) R = (49.01-35.68) 3 = 39.99	Moulded Breadth (B) 74
Stringer plate06	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ 17.76
Sheathing on exposed deck 3"		Ship's Round of Beam = 6.0
$T \left(\frac{L-S}{L} \right) = .25 \times .7936$.20	If restricted by superstructures	Difference 11.76
Depth for Freeboard (D) = 49.01		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{11.76}{4} \times .7964 =$ 2.34

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					
Fore enclosed	107.5	107.5	8'0"	✓	107.5
„ overhang	3.0	1.5			1.5
Trunk aft					
„ forward					
Tonnage opening aft					
„ „ forward					
Total	110.5	109.0			109.0

Standard Height of Superstructure	7.5
„ „ R.Q.D.	
Deduction for complete superstructure	42.0
Percentage covered $\frac{S}{L} =$	20.64
„ „ $\frac{S_1}{L} =$	20.36
„ „ $\frac{E}{L} =$	20.36
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	10.18
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than .2L (if required)	
Deduction =	- 4.28

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
P.	63.52	1		63.52	3.75	3.75	1		3.75
L from A.P.	28.27	4		113.08	-	-	4		-
L „	6.98	2		13.96	-	-	2		-
Amidships		4			-	-	4		-
L from F.P.	13.97	2		27.94	-	-	2		-
L „	56.53	4		226.12	-	-	4		-
F.P.	127.04	1		127.04	35.75	35.75	1		35.75
Total				571.66					39.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{532.16}{18} \left(.75 - .1032 \right) = +19.12$

If limited on account of midship superstructure.

Mean actual sheer aft = *Deficient*
Mean standard sheer aft = *Deficient*

Mean actual sheer forward = *Deficient*
Mean standard sheer forward = *Deficient*

Length of enclosed superstructure forward of amidships = *Sheer deficient*
„ „ aft of „ = *Sheer deficient*

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ 31835 Tons per inch immersion at summer load water line $T =$ 85.9 Deduction = $\frac{\Delta}{40 T}$ inches $=$ 9.26" 9 1/4" = 235 mm	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient .846 + .68 = 1.526 1.36 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 due to sludgeway 63.55 Summer Freeboard = 185.34	112.37 126.07 59.27 4706 mm 4255 4471 4490 4922
Depth to Freeboard Deck = 49.06 Summer freeboard = 15.44 Moulded draught (d) = 33.62 Correction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 8.40" 8 1/2" for Winter North Atlantic Freeboard (if required) = 216 mm			
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :- Tropical Fresh Water Line above Centre of Disc ... 17 3/4" = 451 mm Fresh Water Line „ „ ... 9 1/4" 235 Tropical Line „ „ ... 8 1/2" 216 Winter Line below „ „ ... 8 1/2" 216 Winter North Atlantic Line „ „ ... ✓			

MARKING FORM
23 AUG 1938
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(See Mr. Glover's certificate dated 4/9/33)

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