

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No 31007

Computation of Freeboard for ~~Steam~~ Sailing Ship, Tanker

having Poop, Bridge, & Forecastle
(Type of Superstructures.)

Port of Survey Switzerland

Date of Survey 15th August 1932

Ship's Name "BRITISH ENDEAVOUR" Nationality and Port of Official Number British Registry London 149914 Gross Tonnage 4580 Date of Build 1927
10 MO.

Name of Surveyor D. J. Paton

Moulded Dimensions: Length 380.5' Breadth 50.0' Depth 27.6'
Moulded displacement at moulded draught = 85 per cent. of moulded depth 9989 tons
Coefficient of fineness for use with Tables .716

Particulars of Classification +100 A.1. ✓
Carrying Petroleum in bulk.
Rated for oil fuel 10.27. F.P. at 150° F.

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	27.5'	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	50.00
Stringer plate	.75' (.62' x)	(27.55 - 25.36) 2.927 = +6.41"		Standard Round of Beam = $\frac{B \times 12}{50}$	12"
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	1.04 = 12.48"
T $\left(\frac{L-S}{L}\right) =$				Difference	.48"
Depth for Freeboard (D) =	27.55'	If restricted by superstructures	✓	Restricted to	
				Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L}\right)$	$= \frac{.48}{4} \times .552 = -.07"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	92.77'	92.77'	8.0'		92.77
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	30.0'	30.00	8.0'		30.00
" overhang aft	4.25'	3.19		3.19	
" overhang forward	4.25'	2.12		2.12	
F'cle enclosed	54.97'	37.33	8.0'		37.33
" overhang	37.33	5.03			5.03
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	178.66	170.44			170.44

Standard Height of Superstructure 7.305
" " R.Q.D. 1
Deduction for complete superstructure 40.70
Percentage covered $\frac{S}{L} = 46.95\%$
" " $\frac{S_1}{L} = 44.80\%$
" " $\frac{E}{L} = 44.80\%$
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. 35.80%
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required)
Deduction = $40.70 \times .358 = -14.57"$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	48.05	1		48.05	57.5	57.50	1		57.50
1/4 L from A.P.	21.39	4		85.56	25.67	25.67	4		102.68
1/2 L "	5.28	2		10.56	6.40	6.40	2		12.80
Amidships		4		0			4		
3/4 L from F.P.	10.57	2		21.14	11.62	11.62	2		23.24
1/4 L "	42.77	4		171.08	46.61	46.61	4		186.44
F.P.	96.10	1		96.10	105.0	105.00	1		105.00
Total				432.49					487.66

Mean actual sheer aft = Excess
Mean standard sheer aft

Mean actual sheer forward = Excess
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = } Tanker
" " aft of " = }

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L}\right) = \frac{55.17}{18} \left(\frac{75-2347}{2L}\right) = -1.58"$

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 = 27.55 Ft.
Summer freeboard = 4.40
Moulded draught (d) = 23.15

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 5.79 - 5 1/4
Addition for Winter North Atlantic Freeboard (if required) = 3 3/4

Deduction for Fresh Water.

Displacement in salt water at summer load water line $\Delta = 9933$
Tons per inch immersion at summer load water line $T = 38.46$
Deduction = $\frac{\Delta}{40T}$ inches = 6.47 = 6 1/2"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient	$\frac{786 + .68}{1.36} = \frac{1.16}{1.36}$	58.01
Depth Correction	6.41	62.54
Deduction for superstructures	14.57	
Sheer correction	1.58	
Round of Beam correction	.07	
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	6.41	16.22
		- 9.81
Summer Freeboard =		52.73

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

Tropical Fresh Water Line above Centre of Disc	12 1/2"	Tropical Fresh Water Freeboard	3' 4 1/2"
Fresh Water Line	6 1/2"	Fresh Water	3' 10 1/2"
Tropical Line	5 3/4"	Tropical	5' 11"
Winter Line below	5 3/4"	Winter	4' 10 1/2"
Winter North Atlantic Line	9 1/2"	Winter North Atlantic	5' 2 1/2"

127 AUG 1932

MARKING FORM
12 MAR 1936
RECEIVED

Lloyd's Register
MARKING FORM
RECEIVED 18 AUG 1932

W421-0197

RETAIN

RETAIN



© 2019

Lloyd's Register
Foundation