

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 23651
(For London Office only).

Ship's Name LANCASHIRE	Official Number 140529	Nationality and Port of Registry BRITISH LIVERPOOL	Gross Tonnage 9557	Date of Build 1917 7	Port of Survey
Moulded Dimensions: Length 481.5 Breadth 57.0 Depth 35.37					Date of Survey 23-5-46
Displacement at moulded draught = 85 per cent. of moulded depth 17,746 tons					Surveyor's Signature
Net of fineness for use with Tables 753					Particulars of Classification + 100 A1

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
depth ... 35.37	(a) Where D is greater than Table depth (D-Table depth) R = (35.50 - 32.10) 30 = +10.20	Moulded Breadth (B) 57.0
plate06	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓	Standard Round of Beam = $\frac{B \times 12}{50} = 13.68$
on exposed deck $\left(\frac{-S}{L}\right) = .29 \times .2293$		Ship's Round of Beam = 9.00
		Difference 4.68
Depth for Freeboard (D) = 35.50	If restricted by superstructures ✓	Restricted to
		Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{4.68}{4} \times .3144 = +.37$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
closed ...	48.00	48.00	8.25	✓	48.00
erhang ...	3.08	1.54			1.54
nclosed ...					
verhang ...					
nclosed ...	193.00	193.00	8.25	✓	193.00
verhang aft ...					
verhang forward ...	42.00	21.00			21.00
nclosed OPEN ...	85.00	48.15	8.0	✓	48.15
erhang ...		18.42			18.42
ft ...					
orward ...					
opening aft ...					
" forward					
total ...	371.08	330.11			330.11

Standard Height of Superstructure 7.5

" " R.Q.D.

Deduction for complete superstructure 42.0

Percentage covered $\frac{S}{L} = 77.07$

" " $\frac{S_1}{L} =$ } 68.56

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

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 60.55
(corrected for absence of forecastle (if required))

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

Deduction = 42.0 x .6055 = -25.43

SHEER CORRECTION.

n	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
...	58.15	1	58.15	42.00	42.00	1	42.00
P. ...	25.88	4	103.52	9.00	9.00	4	36.00
...	6.39	2	12.78	-3.00	-3.00	2	-6.00
...	-	4	-	-	-	4	-
P. ...	12.79	2	25.58	16.50	12.79	2	25.58
...	51.76	4	207.04	51.00	51.76	4	207.04
...	116.30	1	116.30	114.00	116.30	1	116.30
...			523.37				420.92

Mean actual sheer aft = 38.7%

Mean standard sheer aft

Mean actual sheer forward = EXCESS

Mean standard sheer forward

Length of enclosed superstructure forward of amidships =

" " aft of " = } SHEER DEFICIENT.

SHEERS AFT			
58.15	1	58.15	42.00
25.88	3	77.64	9.00
6.39	3	19.17	-3.00
-	1	154.96	-
			60.00

on = Difference between sums of products $\left(\frac{.75 - \frac{S}{2L}}{18}\right) = \frac{102.45}{18} \left(\frac{.75 - .3853}{18}\right)$

d on account of midship superstructure. ✓ = +2.07

If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

for Tropical Freeboard. for Winter and Winter North Freeboard.	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 13,569$ Tons per inch immersion at summer load water line $T = 54.12$ Deduction = $\frac{\Delta}{40T}$ inches = 6.27 = 6 1/4"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.753 + .68}{1.36} = \frac{1.433}{1.36}$	96.75 101.95
Depth to Freeboard Deck = 35.73 Summer freeboard = 12.33 Moulded draught (d) = 23.40		Depth Correction ... 10.20 Deduction for superstructures ... 25.43 Sheer correction ... 2.07 Round of Beam correction37 Correction for Thickness of Deck amidships ... 2.66 Other corrections, scantlings, etc. ... 56.18 TO AM ALL SEASONS MOULDED DRAUGHT OF 23'-4 3/4"	12.4 11'-9 3/4" 11'-9 3/4" 12'-4" 12'-4" 71.48 25.43 + 46.05 Summer Freeboard = 148.00

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ^{3 1/2"} Wood, ^{ON} Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...	6 1/4"	Tropical Fresh Water Freeboard ...	12'-4"
Fresh Water Line " " ...	6 1/4"	Fresh Water " " ...	11'-9 3/4"
Tropical Line " " ...	NIL	Tropical " " ...	12'-4"
Winter Line below " " ...	NIL	Winter " " ...	12'-4"
Winter North Atlantic Line " " ...	-	Winter North Atlantic " " ...	-