

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. 36257
(For London Office only).

Ship's Name EMPIRE CONFIDENCE Ex "DUSSELDORF"	Official Number 156144	Nationality and Port of Registry British London	Gross Tonnage 5023 4851.69	Date of Build 1935	Port of Survey London
Moulded Dimensions: Length 406' 8 1/2" 406' 83" Breadth 54' 5 1/2" 54' 5 3/8" Depth 26' 6 1/2" 26' 6 13/16" To "B" DECK.					Date of Survey
Moulded displacement at moulded draught = 85 per cent. of moulded depth 10060 tons					Surveyor's Signature Arthur H. Smith
Coefficient of fineness for use with Tables .704					Particulars of Classification 100A.1. Contemplated.

Depth for Freeboard (D). .57	Depth correction.	Round of Beam correction.
Moulded depth ... 26' 6 13/16"	(a) Where D is greater than Table depth (D-Table depth) R = ✓	Moulded Breadth (B) 54' 5 3/8" .45
Stringer plate04	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = (27.12 - 26.61) × 3 = - 1.53	Standard Round of Beam = $\frac{B \times 12}{50} = 13.07$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	If restricted by superstructures ✓	Ship's Round of Beam 300' m. 100' m. ✓ 3.94 SUPERS. OK. FREEB. OK.
Depth for Freeboard (D) = 26.61		Difference 9.13
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{9.13}{4} \times 0.196 = +.04$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	21-6"	21.50	8'-0 1/2"	-	21.50
" overhang ...	✓				
R.Q.D. enclosed ...	✓				
" overhang ...	✓				
Bridge enclosed ...	377-5 1/2"	377.46	8'-0 1/2"	-	377.46
" overhang aft ...	✓				
" overhang forward ...	✓				
Forecastle enclosed ...	✓				
" overhang ...	✓				
Forecastle aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	7-10 1/2"		✓		
" forward ...	✓				
Total ...	398.96	398.96			398.96

Standard Height of Superstructure **7.5'** ✓
 " " R.Q.D. **✓**
 Deduction for complete superstructure **42'** ✓
 Percentage covered $\frac{S}{L} = 98.04$ ✓
 " $\frac{S_1}{L} = 98.04$ ✓
 " $\frac{E}{L} = 98.04$ ✓
 Percentage from Table, Line A. **97.59** ✓
 (corrected for absence of forecastle (if required))
 Percentage from Table, Line B. **✓**
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required)
 Deduction = **42 × 97.59 = - 40.99** ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	50.68	1	✓	50.68	56"	56	1	✓	56
L from A.P. ...	22.555	4	✓	90.22	24"	24	4	✓	96
L " ...	5.575	2	✓	11.15	5"	5	2	✓	10
Amidships ...	-	4	✓	-	0	-	4	✓	-
L from F.P. ...	11.15	2	✓	22.30	11"	11	2	✓	22
F.P. ...	45.11	4	✓	180.44	50"	50	4	✓	200
F.P. ...	101.37	1	✓	101.37	111"	111	1	✓	111
Total ...			✓	456.16				✓	495

Mean actual sheer aft =
 Mean standard sheer aft =
 Mean actual sheer forward =
 Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **> .1L**
 " " aft of " = **> .1L**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{38.84}{18} \left(\frac{75-4902}{2598} \right) = - .56$
 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 = **26.61**
 Summer freeboard = **2.67**
 Moulded draught (d) = **23.94**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **5.98 = 6**

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 10757$ **10825**

Tons per inch immersion at summer load water line

T = **43.45** **.5**

Deduction = $\frac{\Delta}{40T}$ inches = **6.22 = 6 1/4"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{704+68}{136} = \frac{1384}{136} = 10.176$

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ...

Summer Freeboard = **31.88**

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

Tropical Fresh Water Line above Centre of Disc ...	✓ 12 1/4"
Fresh Water Line " " ...	✓ 6 1/4"
Tropical Line " " ...	✓ 6"
Winter Line below " " ...	✓ 6"
Winter North Atlantic Line " " ...	✓

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " ...

Winter North Atlantic " " ...

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