

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

MAY 14 1937

Ship's Name INKOSI	Official Number 164323	Nationality and Port of Registry British Liverpool	Gross Tonnage 6618.42	Date of Build 1937	Port of Survey Newcastle on Tyne
Moulded Dimensions: Length 411.37 Breadth 55.79 Depth 31.0					Date of Survey 13th May 1937
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12161 tons					Surveyor's Signature H. J. Akesley
Coefficient of fineness for use with Tables .706 .704					Particulars of Classification +100 A1 Contemplated

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 31.00	(a) Where D is greater than Table depth (D - Table depth) R = (31.08 - 27.43) 3 = +10.95	Moulded Breadth (B) 55.79
Stringer plate amidships 40 ... 03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 3.65	Standard Round of Beam = $\frac{B \times 12}{50} =$ 13.39
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .23 \times \frac{87.0}{411.37} =$.05	If restricted by superstructures ✓	Ship's Round of Beam = 14
Depth for Freeboard (D) = 31.08		Difference excess = .61
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) =$ $\frac{.61}{4} \times .4135 = -.06$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
POOP ENCLOSED ... EQUIV. 34.22	34.22	34.22	7.96	✓	34.22
.. overhang ... 4.49	4.49	2.25	✓	✓	2.25
R.Q.D. ENCLOSED ...					
.. overhang ... EQUIV. 162.00	162.00	162.00	7.96	✓	162.00
Bridge ENCLOSED ... 162.00	162.00	1.62	✓	✓	1.62
.. overhang aft ... 2.16	2.16				
.. overhang forward ...					
Fore ENCLOSED ... 41.16	41.16	7.96	✓	✓	41.16
.. overhang ...					
Trunk aft ...					
.. forward ...					
Tonnage opening aft ...					
.. forward ...					
Total ...	244.03	241.25			241.25

Standard Height of Superstructure	7.50'
" " R.Q.D.	✓
Deduction for complete superstructure	42.00"
Percentage covered $\frac{S}{L} =$	59.32
" " $\frac{S_1}{L} =$	58.65
" " $\frac{E}{L} =$	58.65
Percentage from Table, Line A. ✓	
(corrected for absence of forecastle (if required)) ✓	
Percentage from Table, Line B. 44.65	
(corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required) ✓	
Deduction = 42.00 x .4465 = 18.75	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	51.14	1	51.14	50.3	50.30	1	50.30		
1/4 L from A.P. ...	22.755	4	91.02	22.4	22.40	4	89.60		
1/2 L ...	5.625	2	11.25	5.5	5.50	2	11.00		
Amidships ...	-	4	-	-	-	4	-		
3/4 L from F.P. ...	11.25	2	22.50	12.8	12.80	2	25.60		
1/4 L ...	45.51	4	182.04	52.375	52.375	4	209.50		
F.P. ...	102.27	1	102.27	114.25	114.25	1	114.25		
Total ...			460.22				500.25		

Mean actual sheer aft = **Deficient. > 75% of Standard**
Mean standard sheer aftMean actual sheer forward = **Excess.**
Mean standard sheer forwardLength of enclosed superstructure forward of amidships = **> .1L.**" " aft of " = **> .1L.**Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{40.03}{18} (.75 - .2966) = -1.01"$
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 = **31.03**

Summer freeboard = **5.58**

Moulded draught (d) = **25.45**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **6.36 = 6 3/4"**Addition for Winter North Atlantic Freeboard (if required) = **✓**

Deduction for Fresh Water.

Displacement in salt water at summer load water line **25.45** $\Delta =$ **11.70**

Tons per inch immersion at summer load water line

 $T =$ **44.14**Deduction = $\frac{\Delta}{40T}$ inches**= 6.64 = 6 3/4"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{704 + .68}{1.36} = \frac{1.384}{1.36}$ Depth Correction ... **10.95**Deduction for superstructures ... **18.75**Sheer correction ... **1.01**Round of Beam correction ... **.06**Correction for Thickness of Deck amidships ... **.60**

Other corrections, scantlings, etc. ...

75.04**76.36****10.95 20.42 - 9.47****Summer Freeboard = 66.89**

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

Tropical Fresh Water Line above Centre of Disc ...	13"
Fresh Water Line " " ...	6 3/4"
Tropical Line " " ...	6 1/4"
Winter Line below " " ...	6 1/4"
Winter North Atlantic Line " " ...	✓

Tropical Fresh Water Freeboard ...	4'-6"
Fresh Water " " ...	5'-0 1/4"
Tropical " " ...	5'-0 1/4"
Winter " " ...	6'-1 1/4"
Winter North Atlantic " " ...	✓

MAY 1937

003513-003524-0219

RECEIVED

J.T.O.

34970.

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Bridge Front Equiv. Bhd.
 $161.0 + (1.5 \times \frac{2}{3}) = 162.0.$

Trade of ship Between England & West Indies.

Names of sister ships ✓

Builder's name and yard number Swan Hunter & Wigham Richardson Ltd No 1525

Owners T. & G. Harrison Ltd.

Fee £ with F.E.



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