

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

No 109456

Ship's Name "CITY of CAPE TOWN"	Official Number 164340	Nationality and Port of Registry British London Liverpool	Gross Tonnage 8046.17	Date of Build	Port of Survey Liverpool
Moulded Dimensions: Length 486.0' Breadth 62.0' Depth 35.0' to upper dk.				Date of Survey Aug. 1937.	
Moulded displacement at moulded draught = 85 per cent. of moulded depth 18204 tons				Surveyor's Signature A.S. Jackson	
Coefficient of fineness for use with Tables .711				Particulars of Classification 100A1 - with freeboard (contemplated)	

Depth for Freeboard (D). Moulded depth ... 35.0 Stringer plate04 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 35.04	Depth correction. (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(35.04 - 32.40) \times 3 = +7.92$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ If restricted by superstructures	Round of Beam correction. Moulded Breadth (B) 62.0' Standard Round of Beam = $\frac{B \times 12}{50} = 14.88$ Ship's Round of Beam = 15.2 Difference .62 Restricted to .62 Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.62^2}{4} \times 1.234 = -.02$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	75.5'	75.50	8.5'	-	75.50
.. overhang ...	✓		✓		
R.Q.D. enclosed ...	✓		✓		
.. overhang ...	✓		✓		
Bridge enclosed ...	350.5'	350.50	8.5'	-	350.50
.. overhang aft ...	✓		✓		
.. overhang forward ...	✓		✓		
Fore enclosed ...	✓		✓		
.. overhang ...	✓		✓		
Trunk aft ...	✓		✓		
.. forward ...	✓		✓		
Tonnage opening aft ...	✓		✓		
.. forward ...	✓		✓		
Total ...	426.00	426.00			426.00

Standard Height of Superstructure **7.5**
 " " R.Q.D. ✓
 Deduction for complete superstructure **42**
 Percentage covered $\frac{S}{L} =$
 $\frac{S_1}{L} =$
 $\frac{E}{L} =$
87.66
 Percentage from Table, Line A. **84.80**
 (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 × 84.8 = -35.61**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	58.60	1	58.60	56.68	56.68	1	56.68
1/4 L from A.P. ...	26.075	4	104.30	25.43	25.43	4	101.72
1/2 L " ...	6.445	2	12.89	5.56	5.56	2	11.12
Amidships ...	-	4	-	-	-	4	-
3/4 L from F.P. ...	12.89	2	25.78	14.81	14.81	2	29.62
1/4 L " ...	52.15	4	208.60	56.06	56.06	4	224.24
F.P. ...	117.20	1	117.20	117.32	117.32	1	117.32
Total ...			527.37				540.70

Mean actual sheer aft = **Deficient but > .75 standard**
 Mean standard sheer aft
 Mean actual sheer forward = **Excess**
 Mean standard sheer forward
 Length of enclosed superstructure forward of amidships = **> 1L**
 " " aft of " = **> 1L**
 Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{13.33}{18} (.75 - .4383) = -.23$
 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 = 35.04 Summer freeboard = 16.21 Moulded draught (d) = 28.33 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7.08 = 7 Addition for Winter North Atlantic Freeboard (if required) = ✓	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 17169$ Tons per inch immersion at summer load water line $T = 59.03$ Deduction = $\frac{\Delta}{40 T}$ inches $= 7.27 = 7 \frac{1}{4}$	TABULAR FREEBOARD corrected for Fresh Deck (if required) Correction for coefficient $\frac{.711 + .68}{1.36} = \frac{1.391}{1.36}$ <table border="1"> <thead> <tr> <th></th> <th>+</th> <th>-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction ...</td> <td>7.92</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures ...</td> <td>-</td> <td>35.61</td> </tr> <tr> <td>Sheer correction ...</td> <td>-</td> <td>.23</td> </tr> <tr> <td>Round of Beam correction ...</td> <td>-</td> <td>.02</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td>-</td> <td>-</td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td>8.11</td> <td>-</td> </tr> <tr> <td>16.03</td> <td>35.86</td> <td>-19.83</td> </tr> </tbody> </table> Summer Freeboard = 80.50 28.4		+	-	Depth Correction ...	7.92	-	Deduction for superstructures ...	-	35.61	Sheer correction ...	-	.23	Round of Beam correction ...	-	.02	Correction for Thickness of Deck amidships ...	-	-	Other corrections, scantlings, etc. ...	8.11	-	16.03	35.86	-19.83
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:

Tropical Fresh Water Line above Centre of Disc ...	14 1/4	Tropical Fresh Water Freeboard ...	6 1/2
Fresh Water Line " " ...	7 1/4	Fresh Water " " ...	5 6 1/4
Tropical Line " " ...	7	Tropical " " ...	6 1 1/4
Winter Line below " " ...	7	Winter " " ...	6 1 1/2
Winter North Atlantic Line " " ...	7	Winter North Atlantic " " ...	7 3 1/2

31 AUG 1937

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.

Trade of ship General Cargo

Names of sister ships ✓

Builder's name and yard number Messrs. Cammell, Laird & Co. Ltd. No. 1023.

Owners Ellerman, Bucknall & Co. Ltd.

Fee £ : :



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Foundation

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