

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

No 33104

Ship's Name CAPITOL	Official Number	Nationality and Port of Registry BRITISH LONDON	Gross Tonnage	Date of Build 1941	Port of Survey SUNDERLAND
Moulded Dimensions: Length 243.12 Breadth 39.33 Depth 18.50					Date of Survey WHILST BUILDING
Moulded displacement at moulded draught = 85 per cent. of moulded depth (15.73) 3214 tons					Surveyor's Signature P. H. Broadacre
Coefficient of fineness for use with Tables .750					Particulars of Classification +100 A1. With full

Depth for Freeboard (D). Moulded depth 18.50 Stringer plate55 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 18.55	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = $(18.55 - 16.21) \times 1.87 = +4.38$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures	Round of Beam correction. Moulded Breadth (B) 39.33 Standard Round of Beam = $\frac{B \times 12}{50} =$ 9.375 Ship's Round of Beam = 9.5 Difference .125 Restricted to Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.125}{4} \times \frac{234}{4} = -.01$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
" overhang ...	✓				
R.Q.D. enclosed ...	148.96	148.96	4.00	-	148.96
" overhang ...	-				
Bridge enclosed ...	15.75	15.75	7.00	-	15.75
" overhang aft ...	-				
" overhang forward ...	21.40	21.40	6.00	-	21.40
Fore enclosed ...	22.60	21.40	6.00	-	21.40
" overhang33	.16 (SEE SKETCH)			.16
Trunk aft ...	-				
" forward ...	-				
Tonnage opening aft ...	-				
" " forward ...	-				
Total ...	186.47	186.21			186.27

Standard Height of Superstructure	6.0
" " R.Q.D.	3.954
Deduction for complete superstructure	30.31
Percentage covered $\frac{S}{L} =$	76.70
" " $\frac{S_1}{L} =$	76.60
" " $\frac{E}{L} =$	76.60
Percentage from Table, Line A.	71.12
(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 =	30.31 x 71.12 = -21.56

SHEER CORRECTION.

Actual height of R.Q.D. = 4.000
Standard = 3.954
Diff. = .046
= .55"

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	34.31	1		34.31	4.55	12.55	1		12.55
$\frac{1}{8}L$ from A.P. ...	15.265	4		61.06	5.8	5.60	4		22.40
$\frac{2}{8}L$ " ...	3.775	2		7.55	1.4	1.38	2		2.76
Amidships ...	-	4		-	-	-	4		-
$\frac{2}{8}L$ from F.P. ...	7.55	2		15.10	4.38	4.375	2		8.75
$\frac{1}{8}L$ " ...	30.53	4		122.12	17.38	17.375	4		69.50
F.P. ...	68.62	1		68.62	39	39.00	1		39.00
Total ...	308.79			308.76					154.96

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - \frac{S}{2L}}{.75 - \frac{S}{2L}} \right) = \frac{153.80}{18} \left(\frac{.75 - \frac{38.35}{2 \times 243.12}}{.75 - \frac{38.35}{2 \times 243.12}} \right) = +2.13$

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to <u>Deck</u> = 22.55 Summer freeboard = 5.492 Moulded draught (d) = 16.63 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.16 = 4 1/4 Addition for Winter North Atlantic Freeboard (if required) = 6 1/4	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ 3445 Tons per inch immersion at summer load water line $T =$ 19.35 Deduction = $\frac{\Delta}{40T}$ inches = 4.45 $=$ 4 1/2	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.75 + .68}{1.36} = \frac{1.43}{1.36}$ <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td>4.38</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures ...</td> <td>-</td> <td>21.56</td> </tr> <tr> <td>Sheer correction ...</td> <td>3.13</td> <td>-</td> </tr> <tr> <td>Round of Beam correction ...</td> <td>-</td> <td>.01</td> </tr> <tr> <td>Correction for thickness of Deck amidships ...</td> <td>48.00</td> <td>-</td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td>4.55</td> <td>-</td> </tr> <tr> <td>Total</td> <td>60.06</td> <td>21.57</td> </tr> <tr> <td>Summer Freeboard</td> <td>71.00</td> <td></td> </tr> </table>		+	-	Depth Correction ...	4.38	-	Deduction for superstructures ...	-	21.56	Sheer correction ...	3.13	-	Round of Beam correction ...	-	.01	Correction for thickness of Deck amidships ...	48.00	-	Other corrections, scantlings, etc. ...	4.55	-	Total	60.06	21.57	Summer Freeboard	71.00	
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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 ...	8 3/4	Tropical Fresh Water Freeboard ...	5 1/4
Fresh Water Line " " ...	4 1/2	Fresh Water " " ...	5 6 1/2
Tropical Line " " ...	4 1/4	Tropical " " ...	5 6 3/4
Winter Line below " " ...	4 1/4	Winter " " ...	6 3 1/4
Winter North Atlantic Line " " ...	6 1/4	Winter North Atlantic " " ...	6 5 1/4

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 COLLIER

Names of sister ships S.S. FULHAM V BURNTISLAND N° 226

Builder's name and yard number MESSRS S. P. AUSTIN & SON, L^D N° 355

Owners GAS LIGHT & COKE CO. L^D

Fee £ 11

Will be charged on completion



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Foundation