

Clan Cameron 34825

Rpt. C.11 (Comp.).

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JAN 14 1938

Index. No. 35519  
(For London Office only).

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <b>"CLAN BUCHANAN"</b>	Official Number <b>165929</b>	Nationality and Port of Registry <b>British Glasgow</b>	Gross Tonnage <b>7250</b> <b>7266</b>	Date of Build <b>Building</b>	Port of Survey <b>Glasgow</b>
Moulded Dimensions: Length <b>457'</b> Breadth <b>62.75'</b> Depth <b>32.51'</b>					Date of Survey <b>While Building</b>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>15507</b> tons					Surveyor's Signature <b>M. L. Swinton</b>
Coefficient of fineness for use with Tables <b>.685</b>					Particulars of Classification <b>+ 100A1</b> <b>With Freeboard</b> <b>(Contemplated.)</b>

<b>Depth for Freeboard (D).</b> Moulded depth ... <b>32.51'</b> Stringer plate ... <b>.04</b> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ <input checked="" type="checkbox"/> Depth for Freeboard (D) = <b>32.55'</b>	<b>Depth correction.</b> (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(32.55 - 30.47) \times 3 = + 6.24"$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ <input checked="" type="checkbox"/> If restricted by superstructures	<b>Round of Beam correction.</b> Moulded Breadth (B) <b>62.75'</b> Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>15.06</b> Ship's Round of Beam <b>15 1/2" = 15.50</b> Difference <b>.44</b> Restricted to $\text{Correction} = \frac{\text{Diff}^*}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ $\frac{.44}{4} \times .0055 =$ <b>.0012</b>
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### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	38.08	33.08	8.2	-	33.08
" overhang ...	.92	.46		-	.46
R.Q.D. enclosed					
" overhang					
Bridge enclosed...					
" overhang aft ...					
" overhang forward	418.42	418.42	8.2	-	418.42
F'cle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	4.58	2.52	8.2	-	2.52
" forward					
Total ...	457.00	454.48			454.48

Standard Height of Superstructure **7.50**

" " R.Q.D. ☒

Deduction for complete superstructure **42.00**

Percentage covered  $\frac{S}{L} =$  **100.00**

" "  $\frac{S_1}{L} =$  **99.45**

" "  $\frac{E}{L} =$  **99.45**

Percentage from Table, Line A. **99.32**  
(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 =  $42 \times .9932 =$  **- 41.72**

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	55.70	1		55.70	+8.50	68.50	1		68.50
1/4 L from A.P. ...	24.79	4		99.16	27	30.48	4		121.92
1/2 L " ...	6.13	2		12.26	8.5	7.53	2		15.06
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	12.25	2		24.50	14	14.13	2		28.26
3/4 L " ...	49.57	4		198.28	54	57.18	4		228.72
F.P. ...	111.40	1		111.40	120	128.50	1		128.50
Total ...				501.30	+8.50				590.96

Mean actual sheer aft = **2 ins**  
Mean standard sheer aft = **2 ins**

Mean actual sheer forward = **2 ins**  
Mean standard sheer forward = **2 ins**

Length of enclosed superstructure forward of amidships = **43.5**  
" " aft of " = **43.5**

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{89.66}{18} (.75 - .50) =$  **-1.25**  
If limited on account of midship superstructure. ☒

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

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = <b>32.55'</b> Summer freeboard = <b>4.40</b> Moulded draught (d) = <b>28.15'</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>7.04 = 7'</b> Addition for Winter North Atlantic Freeboard (if required) =	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta = 16470 @ 29.0$ Tons per inch immersion at summer load water line $T = 55.75 @ 29.0$ Deduction = $\frac{\Delta}{40T}$ inches $= \frac{16470}{40 \times 55.75} =$ <b>7.23</b> $= 7 1/4"$	<b>TABULAR FREEBOARD</b> (corrected for Fresh Deck (if required)) Correction for coefficient $\frac{.685 + .68}{1.36} = \frac{1.365}{1.36}$ <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td>6.24</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures ...</td> <td>-</td> <td>41.72</td> </tr> <tr> <td>Sheer correction ...</td> <td>-</td> <td>1.25</td> </tr> <tr> <td>Round of Beam correction ...</td> <td>-</td> <td>-</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td>-</td> <td>-</td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td>-</td> <td>-</td> </tr> <tr> <td></td> <td>6.24</td> <td>42.97</td> </tr> </table> Summer Freeboard = <b>52.87</b>		+	-	Depth Correction ...	6.24	-	Deduction for superstructures ...	-	41.72	Sheer correction ...	-	1.25	Round of Beam correction ...	-	-	Correction for Thickness of Deck amidships ...	-	-	Other corrections, scantlings, etc. ...	-	-		6.24	42.97
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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 ...	3' 2 1/2"
Fresh Water Line " " ...	7 1/4"	Fresh Water " " ...	3' 9 1/2"
Tropical Line " " ...	7"	Tropical " " ...	3' 9 3/4"
Winter Line below " " ...	7"	Winter " " ...	4' 11 3/4"
Winter North Atlantic Line " " ...	7"	Winter North Atlantic " " ...	

18 JAN 1938

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