

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Sir James Caird</i> 768.770 + 771 <i>Box No 734.735 + 737</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <i>463.46</i> Breadth <i>61.75</i> Depth <i>34.08</i>	Date of Survey <i>15-3-48</i>				
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons	Surveyor's Signature _____				
Coefficient of fineness for use with Tables <i>.769 assumed</i>	Particulars of Classification <i>+ 100000</i> <i>carrying petroleum in bulk</i> <i>(Contaminated)</i>				

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth 34.08	(a) Where D is greater than Table depth	Moulded Breadth (B) 61.75
Stringer plate06	(D-Table depth) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 14.82$
Sheathing on exposed deck	(34.14 - 30.89) x 3 = 9.75	Ship's Round of Beam = 15.50
T $\left(\frac{L-S}{L}\right) =$	3.25	Difference .68
	(b) Where D is less than Table depth (if allowed)	Restricted to
	(Table depth-D) R = -	Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.68}{4} \times .5828 = -.10$
Depth for Freeboard (D) = 34.14	If restricted by superstructures	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>equivalent</i>	96.79	96.79	8.0	-	96.79
" overhang ...	1.33	.66	"	-	1.33 86
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed <i>equivalent</i>	42.67	42.67	8.0	-	42.67
" overhang aft ...	3.50	2.63	"		2.63
" overhang forward	.83	.42	"		.42
F'cle enclosed <i>equivalent</i>	50.18	50.16	8.0		50.16
" overhang <i>equivalent</i> ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...	195.30	193.33			193.33

Standard Height of Superstructure 7.5

" " R.Q.D. -

Deduction for complete superstructure 42

Percentage covered $\frac{S}{L} = 42.14$

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

" " $\frac{E}{L} = \} 41.72$

Percentage from Table, Line A. Tanker 32.72

(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 = $42 \times .3272 = -13.74$ ✓

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	56.35	1	56.35	67.11	56.35	1	56.35
$\frac{1}{8}$ L from A.P. ...	25.075	4	100.30	25	25.075	4	100.30
$\frac{2}{8}$ L " ...	6.195	2	12.39	6.25	6.195	2	12.39
Amidships ...	-	4	-	-	-	4	-
$\frac{3}{8}$ L from F.P. ...	12.39	2	24.78	12.125	12.125	2	24.25
$\frac{1}{6}$ L " ...	50.15	4	200.60	50.25	50.25	4	201.00
F.P. ...	112.69	1	112.69	111.25	111.25	1	111.25
Total ...			507.11				505.54

Mean actual sheer aft = *Excess*

Mean standard sheer aft =

Mean actual sheer forward = *Deficient*

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

L

aft of " =

Not applicable

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{1.57}{18} (.75 - \frac{2107}{5393}) = +.05$

If limited on account of midship superstructure.

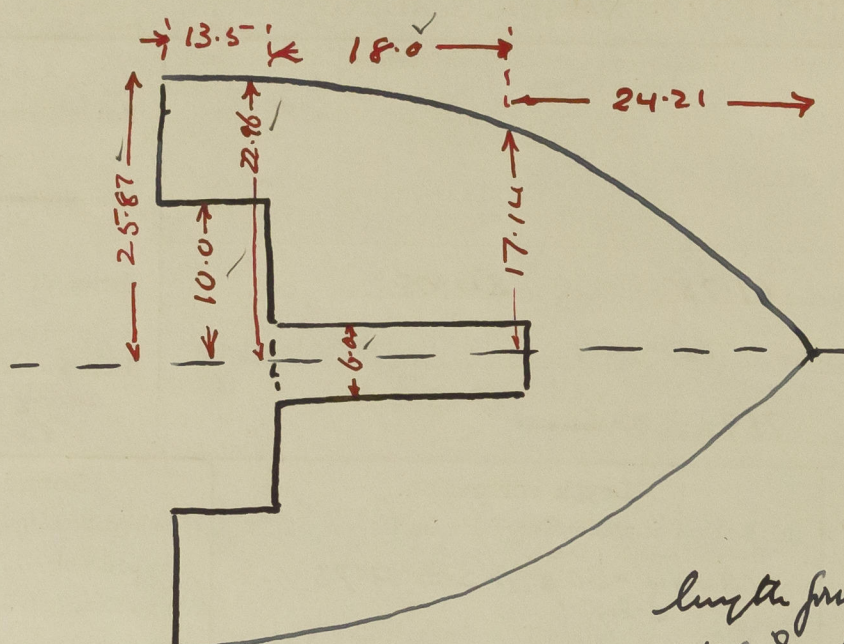
If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = $\frac{\Delta}{40T}$ inches</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient</p>																								
<p style="text-align: right;">Ft.</p> <p>Depth to Freeboard Deck = 34.14</p> <p>Summer freeboard = 6.64</p> <p>Moulded draught (d) = 27.50</p>	<p>$\Delta = 17294$</p> <p>$T = 58.5$</p> <p>Deduction = $\frac{17294}{40 \times 58.5} = 7.39 = 7\frac{1}{2}$</p>	<p>$\frac{.769 + .68}{1.36} = \frac{1.449}{1.36} =$</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">+</th> <th style="text-align: center;">-</th> </tr> </thead> <tbody> <tr> <td>Depth Correction</td> <td style="text-align: center;">9.75</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Deduction for superstructures</td> <td style="text-align: center;">-</td> <td style="text-align: center;">13.74</td> </tr> <tr> <td>Sheer correction</td> <td style="text-align: center;">.05</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Round of Beam correction</td> <td style="text-align: center;">-</td> <td style="text-align: center;">.10</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td></td> <td style="text-align: center;">9.80</td> <td style="text-align: center;">13.84</td> </tr> </tbody> </table> <p style="text-align: right;">Summer Freeboard = 79.68</p>		+	-	Depth Correction	9.75	-	Deduction for superstructures	-	13.74	Sheer correction05	-	Round of Beam correction	-	.10	Correction for Thickness of Deck amidships	-	-	Other corrections, scantlings, etc.	-	-		9.80	13.84
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood , Steel, Deck:						6'-7 3/4"
Tropical Fresh Water Line above Centre of Disc	14 1/4"	Tropical Fresh Water Freeboard	...	5'-5 1/2"
Fresh Water Line	"	"	7 1/2"	Fresh Water	"	6'-0 1/4"
Tropical Line	"	"	6 3/4"	Tropical	"	6'-1"
Winter Line	below	"	6 3/4"	Winter	"	7'-2 1/2"
Winter North Atlantic Line	"	"	11 1/2"	Winter North Atlantic	"	7'-7 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.

File.



Sheer forward.
Standard

12.39	3	37.17
50.15	3	150.45
112.69	1	112.69
		<u>300.31</u>

Actual

12.125	3	36.37
50.8	3	152.4
111.25	1	111.25
		<u>298.37</u>

$$\frac{298.37}{300.31} = .993$$

Equivalent correct

$$\frac{13.5 \times 14.42}{24.42} = \frac{18}{24.21} \times \frac{42.21}{42.21} = \frac{7.97}{50.18}$$

Bridge

$$\frac{44.00}{40.00} \times \frac{40.00}{4.00 \times \frac{2}{3}} = \frac{2.67}{42.67}$$

Top

$$\frac{98.37}{93.62} \times \frac{2}{3} = \frac{3.17}{96.79}$$

$$\frac{4.50}{3.17} = \frac{1.33}{1.33}$$

Length forward of passage.
at side of passage

$$\frac{22.96 + 17.14}{2} = 20.05$$

$$\frac{18 \times 17.05}{20.05} = 15.31$$

$$\frac{(18 - 15.31) \times .993}{2.69} = 2.67$$

$$\frac{25.87 + 22.96}{2} = 24.42$$

$$\frac{13.5 \times 14.42}{24.42} = \frac{7.97}{50.16 \text{ equivalent}}$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation