

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

Ship's Name <i>Brisbane Star</i>	Official Number <i>165365</i>	Nationality and Port of Registry <i>British London</i>	Gross Tonnage <i>12791</i>	Date of Build <i>1936</i>	Port of Survey
Moulded Dimensions: Length <i>522.42</i> Breadth <i>70.00</i> Depth <i>43.37</i>					Date of Survey <i>11th March 1940</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature
Coefficient of fineness for use with Tables <i>.735 estimated.</i>					Particulars of Classification <i>+100H with frames</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth 43.37	(a) Where D is greater than Table depth (D-Table depth) R = (43.46-34.83)3 = +15.89	Moulded Breadth (B) 70.80'
Stringer plate05	8.63	Standard Round of Beam = $\frac{B \times 12}{50}$ = 16.80"
Sheathing on exposed deck	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Ship's Round of Beam = 17.50"
T $\left(\frac{L-S}{L}\right)$ = 25 \times 84.65 = 521.42 .04	✓	Difference Excess = 70"
Depth for Freeboard (D) = 43.46	If restricted by superstructures ✓	Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right)$ = $\frac{70}{4} \times .3271 = -15.89$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	83.00'	83.00	8.0	✓	83.00
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed. <i>Equus</i> ...	100.00'	100.00	8.0	✓	100.00
" overhang aft ...					
" overhang forward ...					
Fore enclosed. <i>Equus</i> ...	68.56	68.56	8.0'	✓	68.56
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	351.56	351.56			351.56

Standard Height of Superstructure 7.51

" " R.Q.D. ✓

Deduction for complete superstructure 42.00".

Percentage covered $\frac{S}{L} = 67.29$ ✓

" " $\frac{S_1}{L} = 67.29$ ✓

" " $\frac{E}{L} = 67.29$ ✓

Percentage from Table, Line A. 58.39

(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 = $42.00 \times .5839 = -24.52$ ✓

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	Mean actual sheer aft =	Mean standard sheer aft =
A.P. ...	62.24	1	62.24	69.5	69.5	1	69.50	Excess	
$\frac{1}{8}$ L from A.P. ...	27.70	4	110.80	31.5	31.5	4	126.00	Mean actual sheer forward =	Excess.
$\frac{2}{8}$ L ..	6.845	2	13.69	8.25	8.25	2	16.50	Mean standard sheer forward	
Amidships ...	-	4	-	-	-	4	-	Length of enclosed superstructure forward of amidships =	> .1
$\frac{2}{8}$ L from F.P. ...	13.69	2	27.38	14.75	14.75	2	29.50 aft of .. =	> .1
$\frac{1}{8}$ L ..	55.40	4	221.60	61.13	61.13	4	244.52		
F.P. ...	124.48	1	124.48	141.75	141.75	1	141.75		
Total ...			560.19				627.77		

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - \frac{S}{2L}}{\frac{18}{2L}} \right) = \frac{67.58}{18} (.75 - \frac{3364}{436}) = -1.58$
 If limited on account of midship superstructure. If limited to maximum allowance of 1½ ins. per 100 ft.

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p style="text-align: right;">Ft.</p> <p>Depth to Freeboard Deck = 43.42</p> <p>Summer freeboard = 13.06</p> <p>Moulded draught (d) = 30.36</p> <p>Deduction for Tropical freeboard and addition for</p> <p>Winter freeboard = $\frac{d}{4}$ inches = 7.59 = 7½</p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>$\Delta = 22,658$ <i>short tons</i></p> <p>Tons per inch immersion at summer load water line</p> <p>T = 70.76 <i>short tons</i></p> <p>Deduction = $\frac{\Delta}{40T}$ inches</p> <p>= 8.00</p> <p>= 8"</p>	<p>TABULAR FREEBOARD <small>corrected for Fresh Deck (if required)</small></p> <p>Correction for coefficient 735 + 68 1.36</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th style="width: 10%; text-align: center;">+</th> <th style="width: 10%; text-align: center;">-</th> </tr> <tr> <td>Depth Correction</td> <td style="text-align: center;">25.89</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;">24.52</td> </tr> <tr> <td>Sheer correction</td> <td style="text-align: center;">-</td> <td style="text-align: center;">1.51</td> </tr> <tr> <td>Round of Beam correction</td> <td style="text-align: center;">-</td> <td style="text-align: center;">.06</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td style="text-align: center;">-</td> <td style="text-align: center;">.48</td> </tr> <tr> <td>Other corrections, scantlings, etc. <i>to correspond to a summer moulded draught of 30' - 4 3/8"</i></td> <td style="text-align: center;">44.27</td> <td style="text-align: center;">.61</td> </tr> <tr> <td></td> <td style="text-align: center;">70.16</td> <td style="text-align: center;">26.89</td> </tr> <tr> <td>Summer Freeboard =</td> <td></td> <td style="text-align: center;">+ 43.57</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">156.75</td> </tr> </table>		+	-	Depth Correction	25.89	-	Deduction for superstructures	-	24.52	Sheer correction	-	1.51	Round of Beam correction	-	.06	Correction for Thickness of Deck amidships	-	.48	Other corrections, scantlings, etc. <i>to correspond to a summer moulded draught of 30' - 4 3/8"</i>	44.27	.61		70.16	26.89	Summer Freeboard =		+ 43.57			156.75
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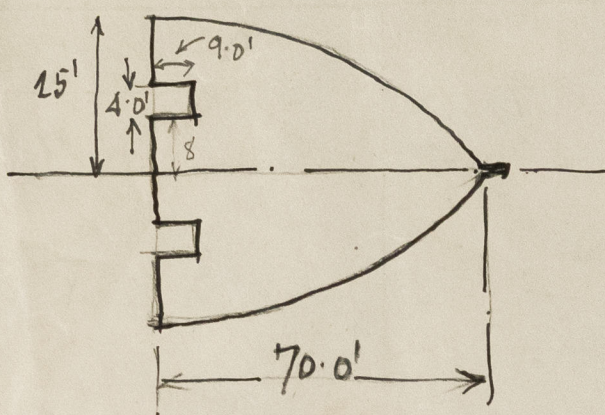
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:

Tropical Fresh Water Line above Centre of Disc ...	15 1/2"	Tropical Fresh Water Freeboard ...	11' - 9 1/4"
Fresh Water Line " " " " " "	8"	Fresh Water " " " " " "	12' - 4 3/4"
Tropical Line " " " " " "	7 1/2"	Tropical " " " " " "	12' - 5 1/4"
Winter Line below " " " " " "	7 1/2"	Winter " " " " " "	13' - 8 1/4"
Winter North Atlantic Line " " " " " "	-	Winter North Atlantic " " " " " "	-

Brisbane Star

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.

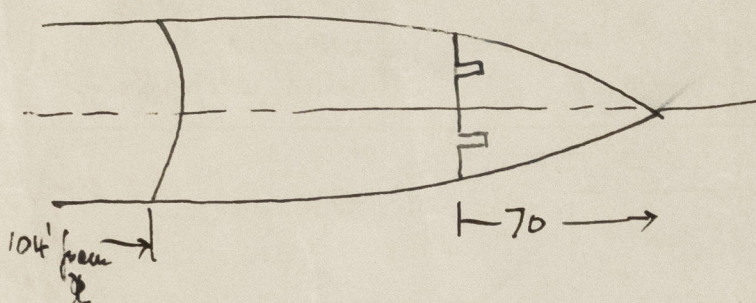
Forecastle equivalent length.



$$\text{Recess } \frac{4 \times 9}{25} = 1.44$$

$$\text{Equis length} = \frac{70}{68.56}$$

Length of wood sheathing.



$$\frac{1}{2} L \quad 261.21$$

$$- 176.56$$

$$\hline 84.65$$

$$\frac{68.56}{108} \quad 104 + 4$$

$$\hline 176.56$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation