

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, SS. BULAN				Port of Survey BOMBAY	
having SHELTER DECK.					
(Type of Superstructures.)					
Ship's Name SS. "BULAN"	Nationality and Port of Registry BRITISH. GLASGOW.	Official Number 147900.	Gross Tonnage 1048	Date of Build 1924.	
Moulded Dimensions: Length 220'-0" Breadth 35'-0" Depth 15'-06"					
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					
Coefficient of fineness for use with Tables assume .70					
Depth for Freeboard (D) 15'-06"		Depth correction		Round of Beam correction	
Moulded depth 22'-6"		(a) Where D is greater than Table depth (D—Table depth) R = (15-11 - 14-67) 1.692 = + .74"		Moulded Breadth (B) 35'	
Stringer plate ... .34 ... .. .38" .03		.44		Standard Round of Beam = $\frac{B \times 12}{50} = \frac{8.40}{50} =$ 8.75"	
Sheathing on exposed deck NIL.		(b) Where D is less than Table depth (if allowed) (Table depth—D) R = ✓		Ship's Round of Beam = 8.75"	
$T \left(\frac{L-S}{L} \right) = \frac{2.5}{12} \left(\frac{220-197.58}{220} \right) =$.02				Difference 4.35	
Depth for Freeboard (D) = 15'-11"		If restricted by superstructures ✓		Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.35}{4} \times \frac{.398}{220} =$ -.03"	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	31.69	31.69	7.5'	✓	31.69
„ overhang ...	13.46	6.73			6.73
R.Q.D. enclosed ...	-				
„ overhang ...	88.33				
Bridge enclosed...	44.17	44.17	7.5'	✓	44.17
„ overhang aft ...	-				
„ overhang forward	35.59				
F'cle enclosed ...	14.25	14.25	7.5'	✓	14.25
„ overhang ...	-				
Trunk aft ...	-				
„ forward ...	-				
Tonnage opening aft ...	-				
„ forward	132.43				
Total ...	132.43	132.43			132.43

Standard Height of Superstructure 6.00

„ „ R.Q.D. ✓

Deduction for complete superstructure 28.00

Percentage covered $\frac{S}{L} = 89.81$

„ „ $\frac{S_1}{L} = 60.20$

„ „ $\frac{E}{L} = 60.20$

Percentage from Table, Line A. ✓

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 46.34

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) ✓

Deduction = $28.00 \times .4634 = 12.98$

SHEER CORRECTION.

Station [min] [sec]	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	32.00	1	32.00	30.5"	30.50	1	30.50
$\frac{1}{6}$ L from A.P. ...	14.24	4	56.96	13"	13.00	4	52.00
$\frac{2}{6}$ L " ...	3.52	2	7.04	2.5"	2.50	2	5.00
Amidships ...	-	4	-	NIL.	-	4	-
$\frac{2}{6}$ L from F.P. ...	7.04	2	14.08	6"	6.00	2	12.00
$\frac{1}{6}$ L " ...	28.48	4	113.92	21.5"	21.50	4	86.00
F.P.	64.00	1	64.00	48"	48.00	1	48.00
Total ...			288.00				233.50

Mean actual sheer aft =
Mean standard sheer aft = } Deficient

Mean actual sheer forward =
Mean standard sheer forward = }

Length of enclosed superstructure forward of amidships = } deficient
L sheer.

aft of " = }
Sheer " forward actual std actual

0	0	1	0	0	
7.04	6.00	3	21.12	18.00	130.50
28.48	21.50	3	85.44	64.50	170.56
64.00	48.00	1	64.00	48.00	= .7651
			170.56	130.50	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{54.50}{18} \left(.75 - \frac{4490}{2010} \right) = + .91"$

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>△ =</p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = $\frac{\Delta}{40}$ inches</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <table border="0" style="width: 100%;"> <tr> <td style="text-align: right;">Correction for coefficient</td> <td style="text-align: center;">$\frac{70 + .68}{1.36}$</td> <td style="text-align: center;">$\frac{1.38}{1.36}$</td> </tr> </table> <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;">.74</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;">12.98</td> </tr> <tr> <td>Sheer correction ...</td> <td style="text-align: center;">.91</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;">.03</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td style="text-align: center;">2.26</td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc. to correspond to a summer mild draught of ...</td> <td style="text-align: center;">8.11</td> <td style="text-align: center;">6.61</td> </tr> <tr> <td></td> <td style="text-align: center;">12.02</td> <td style="text-align: center;">13.01</td> </tr> </tbody> </table> <p style="text-align: right;">Summer Freeboard = 26.00 24.50</p>	Correction for coefficient	$\frac{70 + .68}{1.36}$	$\frac{1.38}{1.36}$		+	-	Depth Correction74	-	Deduction for superstructures ...	-	12.98	Sheer correction91	-	Round of Beam correction ...	-	.03	Correction for Thickness of Deck amidships ...	2.26		Other corrections, scantlings, etc. to correspond to a summer mild draught of ...	8.11	6.61		12.02	13.01
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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	...	6'-8 3/4"	Tropical Fresh Water Freeboard	...	1'-3 3/4"
Fresh Water Line	"	2'-4 3/2"	Fresh Water	"	1'-9"
Tropical Line	"	3'-4"	Tropical	"	1'-10 3/4"
Winter Line below	"	3'-4"	Winter	"	1'-9 1/4"
Winter North Atlantic Line	"	5'-4"	Winter North Atlantic	"	2'-3 3/4"
					2'-5 3/4"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	...	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...	...
	Brackets, Stays	...	...	...	...	...	...	...	...	...
HATCH BEAMS	Number	...	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...	...
FORE AND AFTERS	Number	...	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...	...
	Scantling* and Sketch	...	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...	...
*Are wood fore and afters steel shod at all bearing surfaces? Are battens and wedges efficient and in good condition? Are tarpaulins in good condition and in accordance with rule requirements? Are lashings provided in accordance with rule requirements?										

Particulars of fiddle, funnel and ventilator coamings:—

Pooh equivalent: $28 + 10 = 38.00'$ Overhang $= 45.15 - 31.69$
less 10×20.5 $6.31'$ $= 13.46'$
32.5 enclosed Pooh 31.69'

BULAN.

Particulars of Flush Bunker Scuttles:—

Forecastle equivalent: $28.67 + 14.75 = 43.42$ Overhang $64.10 - 35.59$
less 14.75×17.00 $7.83'$ $= 28.51'$
32 Enclosed foile $35.59'$

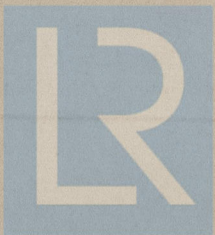
Particulars of Companionways:—

Bridge $= 96.75 - ((2 \times 2.71) + 3.00) = 88.33'$
8.42'

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

Particulars of Gangway Cargo and Coaling Ports:—



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