

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. 29349.
(For London Office only.)

Ship's Name "BADGER."	Official Number	Nationality and Port of Registry BRITISH.	Gross Tonnage	Date of Build 1920 9ms.	Port of Survey
Moulded Dimensions: Length <u>242.2'</u> Breadth <u>40.00'</u> Depth <u>23.67'</u>					Date of Survey <u>28.2.50</u>
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables <u>70 Estimated.</u>					Particulars of Classification <u>+100 A1.</u>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <u>23.67</u>	(a) Where D is greater than Table depth (D-Table depth) R = <u>(23.75-16.14) 7.61 = +14.18"</u>	Moulded Breadth (B) <u>40.00'</u>
Stringer plate ... <u>.48</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>✓</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{40 \times 12}{50} = 9.60'$
Sheathing on exposed deck <u>3"</u>	If restricted by superstructures <u>✓</u>	Ship's Round of Beam = <u>10.00</u>
$T \left(\frac{L-S}{L} \right) = \frac{3}{12} \times \frac{34.2}{242.2} = .04$		Difference <u>.40</u>
Depth for Freeboard (D) = <u>✓ 23.75</u>		Restricted to
		Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.40}{4} \times .1412 = -.01"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	172.00	172.00	7.5	✓	172.00
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	36.00	36.00	7.0	✓	36.00
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	208.00	208.00			208.00

Standard Height of Superstructure 6.00

" " R.Q.D. ✓

Deduction for complete superstructure 30.22

Percentage covered $\frac{S}{L} = \frac{208}{242.2} = 85.88 \%$

Percentage from Table, Line A 82.59

(corrected for absence of fore-castle (if required))

Percentage from Table, Line B.

(corrected for absence of fore-castle (if required))

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

Deduction = 30.22 x .8259 = 24.96"

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	34.22	1		34.22	29.50	29.50	1		29.50
1/2 L from A.P. ...	15.23	4		60.92	8.00	8.00	4		32.00
1/2 L " ...	3.76	2		7.52	- .50	- .50	2		-1.00
Amidships ...	-	4		-	-	-	4		-
1/2 L from F.P. ...	7.53	2		15.06	11.50	7.69	2		15.38
1/2 L " ...	30.46	4		121.84	31.75	31.11	4		124.44
F.P. ...	68.44	1		68.44	66.50	69.90	1		69.90
Total ...				308.00					270.22

Mean actual sheer aft = Deficient 57.03%

Mean standard sheer aft = Deficient 57.03%

Mean actual sheer forward = Excess.

Mean standard sheer forward = Excess.

Length of enclosed superstructure forward of amidships =

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	34.22	1		34.22	29.50	29.50	1		29.50
1/2 L from A.P. ...	15.23	4		60.92	8.00	8.00	4		32.00
1/2 L " ...	3.76	2		7.52	- .50	- .50	2		-1.00
Amidships ...	-	4		-	-	-	4		-
1/2 L from F.P. ...	7.53	2		15.06	11.50	7.69	2		15.38
1/2 L " ...	30.46	4		121.84	31.75	31.11	4		124.44
F.P. ...	68.44	1		68.44	66.50	69.90	1		69.90
Total ...				308.00					270.22

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{37.78}{18} \left(.75 - \frac{.4294}{2} \right) = +.67"$

If limited on account of midship superstructure. .3206

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 23.71

Summer freeboard = 3.46

Moulded draught (d) = 20.25

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 5.06 = 5"

Addition for Winter North Atlantic Freeboard (if required) = 7"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 3784$

Tons per inch immersion at summer load water line

$T = 19.34$

Deduction = $\frac{\Delta}{40 T}$ inches

= 4.89"

= 4 3/4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{70 + .68}{1.36} = \frac{1.38}{1.36}$

30.74

31.19.

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck

Other corrections, scantlings, etc. corresponding to an extreme draught

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

of 21'-9"

Tropical Fresh Water Freeboard

Fresh Water

Tropical

Winter

Winter North Atlantic

Winter North Atlantic

Winter North Atlantic

Winter North Atlantic

Winter North Atlantic

Winter North Atlantic

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.

Allowed sheet forward

196.25
182.41
13.84

$$182.41 + (13.84 \times \frac{7.03}{25.00}) = 186.30$$

$$\begin{array}{lcl} 7.53 \times \frac{186.30}{182.41} & = & 7.69 \\ 30.46 & " & = 31.11 \\ 68.44 & " & = 69.90 \end{array}$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation