

# Estimate of freeboard if length increased Lloyd's Register of Shipping.SURVEYS FOR FREEBOARD.

Index. No. **27637**  
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having \_\_\_\_\_

Port of Survey \_\_\_\_\_

(Type of Superstructures.)

Date of Survey \_\_\_\_\_

Ship's Name

Nationality and Port of Registry

Gross Tonnage

Date of Build

**DORIC STAR.**

Name of Surveyor \_\_\_\_\_

Moulded Dimensions: Length **517.50** Breadth **63.75** Depth **40.52**

Moulded displacement at moulded draught = 85 per cent. of moulded depth \_\_\_\_\_ tons

Particulars of Classification \_\_\_\_\_

of fineness for use with Tables **75 rounded 76**

Depth for Freeboard (D)	Depth correction	Round of Beam correction
... .. <b>40.52</b>	(a) Where D is greater than Table depth (D-Table depth) R = $(40.65 - 34.50) 3.00$ = <b>+ 18.45"</b>	Moulded Breadth (B) <b>63.75</b> Standard Round of Beam = $\frac{B \times 12}{50} = 15.30$ Ship's Round of Beam = <b>8.50</b> Difference <b>6.8 deficient</b>
... .. <b>04</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>09</b>	Restricted to <b>.4711</b> Correction = $\frac{\text{Diff}^a}{4} \times (1 - \frac{S_1}{L}) = \frac{6.8}{4} \times \frac{4647}{4700} = +.79$
Exposed deck ) = $2.5 \times 41.83$ = <b>1.046</b>	If restricted by superstructures <b>✓</b>	
Depth for Freeboard (D) = <b>40.65</b>		

#### DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	Standard Height of Superstructure
closed ... .. <b>40.77</b>	<b>40.77</b>			<b>40.77</b>	<b>7.50</b>
erhang ... .. <b>6.23</b>	<b>6.23</b>			<b>6.23</b>	" " R.Q.D. <b>✓</b>
nclosed ... .. <b>3.12</b>	<b>3.12</b>			<b>3.12</b>	Deduction for complete superstructure <b>42.00</b>
erhang ... .. <b>192.00</b>	<b>192.00</b>			<b>192.00</b>	Percentage covered $\frac{S}{L} = 58.17\%$
nclosed ... .. <b>192.00</b>	<b>192.00</b>			<b>192.00</b>	" " $\frac{S_1}{L} = 53.53\%$
erhang aft ... .. <b>79</b>	<b>79</b>			<b>79</b>	" " $\frac{E}{L} = 55.53\%$ } <b>52.89</b>
erhang forward ... .. <b>37.96</b>	<b>37.96</b>			<b>37.96</b>	Percentage from Table, Line A.
nclosed ... .. <b>62.00</b>	<b>62.00</b>			<b>62.00</b>	(corrected for absence of forecastle (if required))
erhang ... .. <b>273.68</b>	<b>273.68</b>			<b>273.68</b>	Percentage from Table, Line B.
ft ... .. <b>273.68</b>	<b>273.68</b>			<b>273.68</b>	(corrected for absence of forecastle (if required))
orward ... .. <b>273.68</b>	<b>273.68</b>			<b>273.68</b>	Interpolation for bridge less than 2L (if required)
opening aft ... .. <b>273.68</b>	<b>273.68</b>			<b>273.68</b>	Deduction = $42.00 \times \frac{3889}{3953} = -16.33$
" forward ... .. <b>273.68</b>	<b>273.68</b>			<b>273.68</b>	
total ... .. <b>301.00</b>	<b>276.96</b>			<b>276.96</b>	

#### SHEER CORRECTION.

Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft
61.75	1	✓	61.75	41.75	41.75	1	✓	41.75	Mean standard sheer aft = Deficient
27.47	4	✓	109.88	17.25	17.25	4	✓	69.00	Mean actual sheer forward = Deficient <b>63.13</b>
6.79	2	✓	13.58	3.50	3.50	2	✓	7.00	Mean standard sheer forward = Deficient
✓	4	✓	✓	✓	✓	4	✓	✓	Length of enclosed superstructure forward of amidships = } Sheers
13.58	2	✓	27.16	9.75	9.75	2	✓	19.50	" aft of " = } deficient
54.95	4	✓	219.80	34.25	34.25	4	✓	137.00	Sheers <b>for</b> Standard <b>29.25</b> Actual <b>41.75</b>
123.50	1	✓	123.50	75.75	75.75	1	✓	75.75	<b>164.85</b> <b>82.41</b> <b>102.75</b> <b>51.75</b>
555.67	✓	✓	555.67	✓	✓	✓	✓	350.00	<b>123.50</b> <b>20.37</b> <b>75.75</b> <b>10.50</b>
									<b>329.07</b> <b>47.53</b> <b>107.75</b> <b>102.00</b> = <b>63.13</b>
n = $\frac{\text{Difference between sums of products}}{18} (\frac{75-S}{2L}) = \frac{205.67}{18} (\frac{75 - 2908}{2908}) = +5.25$									<b>Standard</b>
on account of midship superstructure.									If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD	corrected for Flush Deck (if required)
or Winter and Winter North Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	$\frac{68+26}{144} = \frac{164}{136}$
h to Freeboard Deck = Ft.	Δ =	Depth Correction ... ..	18.45
mer freeboard =	Tons per inch immersion at summer load water line	Deduction for superstructures ... ..	16.33
Moulded draught (d) =	T =	Sheer correction ... ..	5.25
Tropical freeboard and addition for	Deduction = $\frac{\Delta}{40T}$ inches	Round of Beam correction ... ..	.79
eeboard = $\frac{d}{4}$ inches =	=	Correction for Thickness of Deck amidships ... ..	1.08
Winter North Atlantic Freeboard (if		Other corrections, scantlings, etc. ... ..	50.17
			<b>24.47</b> <b>17.68</b> + <b>7.09</b>
			Summer Freeboard = <b>120.79</b>

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, <b>W</b> , Steel, Deck:—	
Tropical Fresh Water Line above Centre of Disc ... ..	Tropical Fresh Water Freeboard ... ..
Fresh Water Line " " ... ..	Fresh Water " " ... ..
Tropical Line " " ... ..	Tropical " " ... ..
Winter Line below " " ... ..	Winter " " ... ..
Winter North Atlantic Line " " ... ..	Winter North Atlantic " " ... ..

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