

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

Ship's Name SUSSEX.	Official Number 165389	Nationality and Port of Registry British London	Gross Tonnage	Date of Build 1937	Port of Survey
Moulded Dimensions: Length 530.0' Breadth 70.0' Depth 47.5'					Date of Survey 23.4.42
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables 722 (estimated)					Particulars of Classification +100A1 with freeboard.
Depth for Freeboard (D).		Depth correction.		Round of Beam correction.	
Moulded depth	47.50	(a) Where D is greater than Table depth (D - Table depth) R = (47.63 - 35.33) x 3 = + 36.90"		Moulded Breadth (B) 70.00'	
Stringer plate	94" .08	12.30		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 = 17.00"	
T $\left(\frac{L-S}{L} \right) =$ 21 x 130.33	.05	If restricted by superstructures ✓		Difference .20"	
	530			Restricted to ✓	
Depth for Freeboard (D) =	47.63			Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.20}{4} = -.05"$	

DEDUCTION FOR SUPERSTRUCTURES

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
„ F'cle enclosed ...					
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...					

Flush-decked

Standard Height of Superstructure

„ „ R.Q.D.

Deduction for complete superstructure

Percentage covered $\frac{S}{L} =$ } 0

„ „ $\frac{S_1}{L} =$ }

„ „ $\frac{E}{L} =$ }

Percentage from Table, Line A.
(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 = Nil.

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	63.00	1	63.00	65.61	65.62	1	65.61
$\frac{1}{8}$ L from A.P. ...	18.03	4	112.12	29.61	29.62	4	118.48
$\frac{2}{8}$ L " ...	6.93	2	13.86	7.37	7.37	2	14.74
Amidships ...	-	4	-	-	-	4	-
$\frac{2}{8}$ L from F.P. ...	13.86	2	27.72	17.00	17.00	2	34.00
$\frac{1}{8}$ L " ...	56.06	4	224.24	66.50	66.50	4	266.00
F.P. ...	126.00	1	126.00	150.37	150.37	1	150.37
Total ...			566.94				649.21

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{82.27}{18} (.75) = -3.43''$

If limited on account of midship superstructure. No; flush deck.

Mean actual sheer aft = Excess.
Mean standard sheer aft =

Mean actual sheer forward = Excess.
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = } Flush-decks.
" " aft of " = }

<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 = <u>47.79</u></p> <p>Summer freeboard = <u>14.42</u></p> <p>Moulded draught (d) = <u>33.37</u></p> <p>Deduction for Tropical freeboard and addition for</p> <p>Winter freeboard = $\frac{d}{4}$ inches = <u>8.34 - 8 1/4"</u></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>$\Delta = 24991$</p> <p>Tons per inch immersion at summer load water line</p> <p>T = <u>72.50</u></p> <p>Deduction = $\frac{\Delta}{40 T}$ inches</p> <p style="text-align: center;">= 8.62</p> <p style="text-align: center;">= 8 1/2"</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient $\frac{.722 + .68}{1.36} = \frac{1.402}{1.36}$</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;">36.90</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;">-</td> </tr> <tr> <td>Sheer correction</td> <td style="text-align: center;">-</td> <td style="text-align: center;">3.43"</td> </tr> <tr> <td>Round of Beam correction</td> <td style="text-align: center;">-</td> <td style="text-align: center;">.05</td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td style="text-align: center;">1.92</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Other corrections, scantlings, etc. <i>to be considered...</i></td> <td style="text-align: center;">15.14</td> <td></td> </tr> <tr> <td><i>to a summer moulded draught of 33' - 4 1/2".</i></td> <td style="text-align: center;">53.96</td> <td style="text-align: center;">3.48</td> </tr> <tr> <td></td> <td colspan="2" style="text-align: right;">+ 50.48</td> </tr> <tr> <td></td> <td colspan="2" style="text-align: right;">Summer Freeboard = 173.00</td> </tr> </tbody> </table>		+	-	Depth Correction	36.90	-	Deduction for superstructures	-	-	Sheer correction	-	3.43"	Round of Beam correction	-	.05	Correction for Thickness of Deck amidships ...	1.92	-	Other corrections, scantlings, etc. <i>to be considered...</i>	15.14		<i>to a summer moulded draught of 33' - 4 1/2".</i>	53.96	3.48		+ 50.48			Summer Freeboard = 173.00	
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—		14' - 5"	
Tropical Fresh Water Line above Centre of Disc	... 16 3/4"	Tropical Fresh Water Freeboard	... 13' - 0 1/4"
Fresh Water Line	... 8 1/2"	Fresh Water	... 13' - 8 1/2"
Tropical Line	... 8 1/4"	Tropical	... 13' - 8 3/4"
Winter Line below	... 8 1/4"	Winter	... 15' - 1 1/4"
Winter North Atlantic Line	... ✓	Winter North Atlantic	... ✓