

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name Auxiliary Barque "FOZ DO DOURO"	Official Number	Nationality and Port of Registry Portuguese Oporto	Gross Tonnage	Date of Build 1892-3	Port of Survey Philadelphia
Dimensions: Length 257.5' Breadth 43'0" Depth 25.25'					Date of Survey During alterations
Displacement at moulded draught = 85 per cent. of moulded depth 5073 tons					Surveyor's Signature <i>H.R. Smith</i>
Coefficient of fineness for use with Tables .747					Particulars of Classification *100A1 SS Bal. 4th No.3, 2.43

Depth for Freeboard (D). Moulded depth ... 25.25' Plate04 Allowance on exposed deck $\left(\frac{L-S}{L}\right) = .25 \times .41 = .10$ Depth for Freeboard (D) = 25.39	Depth correction. (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(25.39 - 17.17) 1980 = +1627"$ (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ If restricted by superstructures	Round of Beam correction. Moulded Breadth (B) 43.0' Standard Round of Beam = $\frac{B \times 12}{50} = 10.32$ Ship's Round of Beam = 10.5 Difference .18 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.18}{4} \times .4181 = -.02$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Enclosed ...	70.0'	70.00	7.0'		70.00
Overhang46'	.23			.23
D. enclosed ...					
Overhang ...					
Age enclosed ...	52.0'	52.00	7.33'		52.00
Overhang aft63	.47			.47
Overhang forward54	.27			.27
Open ...	28.0'	26.87	7.0'		26.87
Overhang ...					
Work aft ...					
Forward ...					
Age opening aft ...					
" forward					
Total ...	151.63	149.84			149.84

Standard Height of Superstructure **6.075**

" " R.Q.D.

Deduction for complete superstructure **31.75**

Percentage covered $\frac{S}{L} = 58.89$

" " $\frac{S_1}{L} = 58.19$

" " $\frac{E}{L} = 58.19$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **44.19**
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = **31.75 x .4419 = -14.03**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	35.75	1		35.75	36"	37.00	1		37.00
Midship A.P. ...	15.91	4		63.64	13.43	15.01	4		60.04
" ...	3.93	2		7.86	3.35	3.75	2		7.50
Ship's ...	-	4		-	0	-	4		-
Midship F.P. ...	7.86	2		15.72	14.77	8.98	2		17.96
" ...	31.82	4		127.28	59.25	35.94	4		143.76
...	71.50	1		71.50	75"	70.00	1		70.00
Total ...				321.75					336.26

Mean actual sheer aft = **> .75**
Mean standard sheer aft

Mean actual sheer forward = **Excess**
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = **.110**
L

" " aft of " = **.092**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{14.51}{18} \times .4556 = -.37$
 Limited on account of midship superstructure. $.37 \times \frac{.192}{.200} = -.35$
 If limited to maximum allowance of 1½ ins. per 100 ft.

Correction for Tropical Freeboard. Correction for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 25.54 Summer freeboard = 3.27 Moulded draught (d) = 22.27 Correction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 5½" Correction for Winter North Atlantic Freeboard (if required) = 7½"	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40T}$ inches = 5½"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.68 + .747}{1.36} = \frac{1.427}{1.36}$ <table border="1"> <tr> <td>Depth Correction</td><td>...</td><td>16.27</td></tr> <tr> <td>Deduction for superstructures</td><td>...</td><td>14.03</td></tr> <tr> <td>Sheer correction</td><td>...</td><td>.35</td></tr> <tr> <td>Round of Beam correction</td><td>...</td><td>.02</td></tr> <tr> <td>Correction for Thickness of Deck amidships</td><td>...</td><td>1.80</td></tr> <tr> <td>Other corrections, scantlings, etc.</td><td>...</td><td>-</td></tr> <tr> <td>Summer Freeboard</td><td>18.07</td><td>14.40</td></tr> </table>	Depth Correction	...	16.27	Deduction for superstructures	...	14.03	Sheer correction35	Round of Beam correction02	Correction for Thickness of Deck amidships	...	1.80	Other corrections, scantlings, etc.	...	-	Summer Freeboard	18.07	14.40
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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 ...	11"	Tropical Fresh Water Freeboard ...	2' 4½"
Fresh Water Line " " ...	5½"	Fresh Water " " ...	2' 9½"
Tropical Line " " ...	5½"	Tropical " " ...	2' 9½"
Winter Line below " " ...	5½"	Winter " " ...	3' 8½"
Winter North Atlantic Line " " ...	7½"	Winter North Atlantic " " ...	3' 10½"

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.

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation