

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, ~~SAILING SHIP, TANKER.~~)

 Index. No. **32035.**
 (For London Office only).

Ship's Name VASCO "GARBI." <i>Bld. 18/4</i>	Official Number	Nationality and Port of Registry <i>Spanish.</i> <i>Bilbao.</i>	Gross Tonnage <i>1193.</i>	Date of Build <i>1926</i> <i>6.</i>	Port of Survey <i>Antwerp.</i> Date of Survey <i>15th July 1938.</i> Surveyor's Signature <i>A. Letac.</i> Particulars of Classification <i>+ 100 A.1.</i>
Moulded Dimensions: Length <i>66.75</i> M. Breadth <i>10.514</i> M. Depth <i>5.334</i> M.					
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					
Coefficient of fineness for use with Tables <i>.77</i> (estimated)					

Depth for Freeboard (D). Moulded depth ... <i>5.334</i> Stringer plate ... <i>.011</i> Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <i>✓</i> Depth for Freeboard (D) = <i>✓ 5.345</i>	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = <i>8.33(5.345 - 4.45) 16.86 = + 126</i> <i>mm.</i> <i>895</i> (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures	Round of Beam correction. Moulded Breadth (B) = <i>10.514</i> M. Standard Round of Beam = $\frac{B^2}{50} =$ <i>210</i> <i>mm.</i> Ship's Round of Beam = <i>216</i> <i>mm.</i> Difference <i>excess</i> = <i>6</i> <i>mm.</i> Restricted to Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ $\frac{6}{4} \times .3175 =$ <i>✓ 0.476</i> <i>MIL.</i>
---	---	---

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height <i>mm.</i>	Height Correction	Effective Length (E)	
Poop enclosed ...						
" overhang ...						
R.Q.D. enclosed ...	<i>✓ 19.252</i>	<i>✓ 19.252</i>	<i>✓ 1167</i>	<i>✓</i>	<i>✓ 19.252</i>	Standard Height of Superstructure <i>1830</i> <i>mm.</i>
" overhang ...						" R.Q.D. <i>1156</i> <i>mm.</i>
Bridge enclosed ...	<i>✓ 18.502</i>	<i>✓ 17.895</i>	<i>✓ 2134</i>	<i>✓</i>	<i>✓ 17.895</i>	Deduction for complete superstructure <i>709</i> <i>mm.</i>
" overhang aft ...						Percentage covered $\frac{S}{L} =$ <i>70.32</i> <i>✓</i>
" overhang forward ...	<i>✓ .762</i>	<i>✓ .381</i>	<i>✓ 2134</i>	<i>✓</i>	<i>✓ .381</i>	" $\frac{S_1}{L} =$ <i>68.25</i>
Fore enclosed EQUIVALENT	<i>✓ 7.630</i>	<i>✓ 7.630</i>	<i>✓ 2134</i>	<i>✓</i>	<i>✓ 7.630</i>	" $\frac{E}{L} =$ <i>68.25</i>
" overhang ...	<i>✓ .788</i>	<i>✓ .394</i>	<i>✓ 2134</i>	<i>✓</i>	<i>✓ .394</i>	Percentage from Table, Line A. <i>60.02</i>
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Percentage from Table, Line B. <i>✓</i>
Tonnage opening aft ...						(corrected for absence of forecastle (if required)) <i>✓</i>
" forward ...						Interpolation for bridge less than .2L (if required) <i>✓</i>
Total ...	<i>✓ 46.934</i>	<i>✓ 45.552</i>			<i>✓ 45.552</i>	Deduction = <i>709</i> \times <i>.6002</i> = <i>426</i> <i>mm.</i>

SHEER CORRECTION.

Station	Standard Ordinate <i>mm.</i>	S	M	Product	Actual Ordinate <i>mm.</i>	Effective Ordinate	S	M	Product	
A.P. ...	<i>✓ 810</i>	<i>✓ 1</i>	<i>✓ 810</i>	<i>✓ 787</i>	<i>✓ 787</i>	<i>✓ 1</i>	<i>✓ 787</i>	<i>✓ 787</i>	<i>✓ 787</i>	Mean actual sheer aft = <i>Deficient</i> <i>> 75 % of Standard.</i> <i>✓</i>
$\frac{1}{4}$ L from A.P. ...	<i>✓ 360</i>	<i>✓ 4</i>	<i>✓ 1440</i>	<i>✓ 356</i>	<i>✓ 356</i>	<i>✓ 4</i>	<i>✓ 1424</i>	<i>✓ 1424</i>	<i>✓ 1424</i>	Mean actual sheer forward = <i>Excess.</i> <i>✓</i>
$\frac{2}{4}$ L " ...	<i>✓ 90</i>	<i>✓ 2</i>	<i>✓ 180</i>	<i>✓ 89</i>	<i>✓ 89</i>	<i>✓ 2</i>	<i>✓ 178</i>	<i>✓ 178</i>	<i>✓ 178</i>	Mean standard sheer forward = <i>Excess.</i> <i>✓</i>
Amidships ...	<i>-</i>	<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>4</i>	<i>-</i>	<i>-</i>	<i>-</i>	Length of enclosed superstructure forward of amidships = <i>.066</i> <i>✓</i>
$\frac{3}{4}$ L from F.P. ...	<i>✓ 180</i>	<i>✓ 2</i>	<i>✓ 360</i>	<i>✓ 210</i>	<i>✓ 210</i>	<i>✓ 2</i>	<i>✓ 420</i>	<i>✓ 420</i>	<i>✓ 420</i>	" aft of " = <i>.50</i> <i>✓</i>
$\frac{1}{4}$ L " ...	<i>✓ 720</i>	<i>✓ 4</i>	<i>✓ 2880</i>	<i>✓ 844</i>	<i>✓ 844</i>	<i>✓ 4</i>	<i>✓ 3376</i>	<i>✓ 3376</i>	<i>✓ 3376</i>	$18 \times \frac{.166}{.200} =$ <i>15</i> <i>mm.</i> <i>✓</i>
F.P. ...	<i>✓ 1620</i>	<i>✓ 1</i>	<i>✓ 1620</i>	<i>✓ 1905</i>	<i>✓ 1905</i>	<i>✓ 1</i>	<i>✓ 1905</i>	<i>✓ 1905</i>	<i>✓ 1905</i>	
Total ...			<i>✓ 7290</i>				<i>✓ 8090</i>	<i>✓ 8090</i>	<i>✓ 8090</i>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{.2L} \right) =$ $\frac{800}{18} \left(\frac{.75 - .3516}{.3984} \right) =$ *✓ -18* *mm.*
 If limited on account of midship superstructure. *YES. -15* *mm.* *✓*
 If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. *✓*

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = <i>5.345</i> <i>M.</i> Summer freeboard = <i>.400</i> Moulded draught (d) = <i>4.945</i> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{48} =$ <i>103</i> <i>mm.</i> Addition for Winter North Atlantic Freeboard <i>required</i> = <i>153</i> <i>mm.</i> <i>✓</i>	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 $\frac{d}{48} =$ <i>103</i> <i>mm.</i> <i>✓</i>	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.77 + .68}{1.36} = \frac{1.45}{1.36}$ <i>✓</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td><i>126</i> <i>✓</i></td> <td><i>-</i></td> </tr> <tr> <td>Deduction for superstructures ...</td> <td><i>-</i></td> <td><i>426</i> <i>✓</i></td> </tr> <tr> <td>Sheer correction ...</td> <td><i>-</i></td> <td><i>15</i> <i>✓</i></td> </tr> <tr> <td>Round of Beam correction ...</td> <td><i>-</i></td> <td><i>-</i> <i>✓</i></td> </tr> <tr> <td>Correction for Thickness of Deck amidships ...</td> <td><i>-</i></td> <td><i>-</i> <i>✓</i></td> </tr> <tr> <td>Other corrections, scantlings, etc. ...</td> <td><i>-</i></td> <td><i>-</i> <i>✓</i></td> </tr> <tr> <td></td> <td><i>126</i> <i>✓</i></td> <td><i>441</i> <i>✓</i></td> </tr> </table> Summer Freeboard = <i>400</i> <i>mm.</i> <i>✓</i>		+	-	Depth Correction ...	<i>126</i> <i>✓</i>	<i>-</i>	Deduction for superstructures ...	<i>-</i>	<i>426</i> <i>✓</i>	Sheer correction ...	<i>-</i>	<i>15</i> <i>✓</i>	Round of Beam correction ...	<i>-</i>	<i>-</i> <i>✓</i>	Correction for Thickness of Deck amidships ...	<i>-</i>	<i>-</i> <i>✓</i>	Other corrections, scantlings, etc. ...	<i>-</i>	<i>-</i> <i>✓</i>		<i>126</i> <i>✓</i>	<i>441</i> <i>✓</i>
	+	-																								
Depth Correction ...	<i>126</i> <i>✓</i>	<i>-</i>																								
Deduction for superstructures ...	<i>-</i>	<i>426</i> <i>✓</i>																								
Sheer correction ...	<i>-</i>	<i>15</i> <i>✓</i>																								
Round of Beam correction ...	<i>-</i>	<i>-</i> <i>✓</i>																								
Correction for Thickness of Deck amidships ...	<i>-</i>	<i>-</i> <i>✓</i>																								
Other corrections, scantlings, etc. ...	<i>-</i>	<i>-</i> <i>✓</i>																								
	<i>126</i> <i>✓</i>	<i>441</i> <i>✓</i>																								

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:

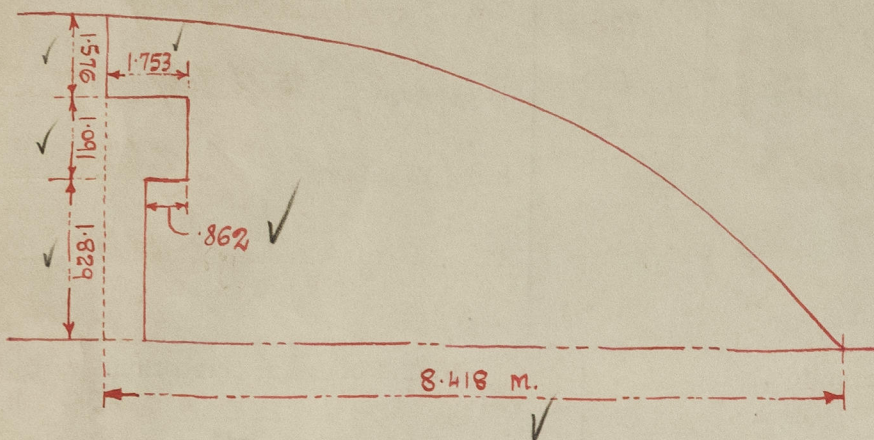
Tropical Fresh Water Line above Centre of Disc ... <i>206</i> <i>mm.</i> Fresh Water Line " " ... <i>103</i> <i>mm.</i> Tropical Line " " ... <i>103</i> <i>mm.</i> Winter Line below " " ... <i>103</i> <i>mm.</i> Winter North Atlantic Line " " ... <i>153</i> <i>mm.</i>	Tropical Fresh Water Freeboard ... <i>194</i> <i>mm.</i> Fresh Water " " ... <i>297</i> <i>mm.</i> Tropical " " ... <i>297</i> <i>mm.</i> Winter " " ... <i>503</i> <i>mm.</i> Winter North Atlantic " " ... <i>553</i> <i>mm.</i>
--	--

RECEIVED

11 MAY 1920

Vasco

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.



Forecastle Equivalent Bulkhead.

$$\begin{aligned} 2.920 \times .891 &= 2.601 \checkmark \\ 1.091 \times .862 &= .940 \checkmark \\ \checkmark 3.541 \div 4.496 &= .788 \text{ overhang.} \checkmark \end{aligned}$$

$$\begin{aligned} 8.418 \\ .788 \\ \hline 7.630 \text{ equivalent enclosed.} \checkmark \end{aligned}$$

Equivalent Length of Bridge.

$$\begin{aligned} \text{Length of Raised Quarter Deck} &= 19.252 \checkmark \\ \text{Length of Bridge} &= 18.502 \checkmark \\ \text{Combined length.} &= 37.754 \div 66.75 = .5656. \checkmark \end{aligned}$$

The combined Raised Quarter Deck and Bridge is treated as a Poop with class 2 closing appliances in the forward bulkhead and having an internal intact bulkhead

$$\begin{aligned} \text{Allowable length of Poop } .7L \text{ in length} &= 90\% \checkmark \\ \text{" " " " } .5L \text{ " " " } &= 100\%. \checkmark \\ \text{" " " " } .5656L \text{ " " " } &= 100 - \frac{10 \times 6.56}{20} = 96.72\%. \checkmark \end{aligned}$$

$$\begin{aligned} \text{Portion abaft internal intact bulkhead} &= 19.252 \times 100\% = 19.252 \checkmark \\ \text{" forward of " " " " } &= 18.502 \times 96.72\% = 17.895. \checkmark \end{aligned}$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



© 2021

Lloyd's Register
Foundation