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Index. No.
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

| | | | | | |
|---|-----------------------------|--|-------------------------------|---------------------------------|--|
| Ship's Name "VASCO" now sailing as "GARBI" | Official Number 9 | Nationality and Port of Registry Spanish. Bilbao | Gross Tonnage 1193. | Date of Build 1926-6. | Port of Survey Antwerp |
| Moulded Dimensions: Length 219.0' Breadth 34.5' Depth 17' 6" | | | | | Date of Survey 15th July 1928 |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth 9 tons | | | | | Surveyor's Signature <i>[Signature]</i> |
| Coefficient of fineness for use with Tables .77 (assumed) | | | | | Particulars of Classification H100 A1. |

| | | | | | |
|---|--------------|--|--|--|---|
| Depth for Freeboard (D). | | Depth correction. | | Round of Beam correction. | |
| Moulded depth | ... 17.50 | (a) Where D is greater than Table depth (D-Table depth) R = (17.53-14.60) 1.684 = + 4.93" | | Moulded Breadth (B) | 34.50 |
| Stringer plate |04 | (b) Where D is less than Table depth (if allowed) (Table depth-D) R = | | Standard Round of Beam = $\frac{B \times 12}{50}$ | = 8.28" |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ | ✓ | | | Ship's Round of Beam | = 8.50" |
| Depth for Freeboard (D) = | 17.54 | If restricted by superstructures | | Difference | excess 1.22" |
| | | | | Restricted to | |
| | | | | Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right)$ | = $\frac{2.2^2}{4} \times .3174 = -.02$ |

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 ... | 63.2 | 63.17 | 3' 10" | ✓ | 63.17 |
| „ overhang ... | .71 | | | | |
| Bridge enclosed ... | 60.25 | 58.75 | 7' 0" | ✓ | 58.75 |
| „ overhang aft ... | .50 | | | | |
| „ overhang forward | 2.6 | 1.25 | | | 1.25 |
| F'cle enclosed <i>excess</i> | 25.04 | 25.04 | 7' 0" | ✓ | 25.04 |
| „ overhang ... | 2.58 | 1.29 | | | 1.29 |
| Trunk aft ... | | | | | |
| „ forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| „ „ forward | | | | | |
| Total ... | 154.00 | 149.50 | | | 149.50 |

| | |
|---|----------------|
| Standard Height of Superstructure | 6.00' |
| „ „ R.Q.D. | 3.793' |
| Deduction for complete superstructure | 27.90" |
| Percentage covered $\frac{S}{L} =$ | 70.33 |
| „ „ $\frac{S_1}{L} =$ | 68.26 |
| „ „ $\frac{E}{L} =$ | 68.26 |
| Percentage from Table, Line A. (corrected for absence of forecastle (if required)) | 60.04 |
| Percentage from Table, Line B. (corrected for absence of forecastle (if required)) | |
| Interpolation for bridge less than 2L (if required) | |
| Deduction = $27.90 \times .6004 =$ | -16.75" |

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|-------------------------------|-------------------|----------|----------|---------------|-------------------------------------|--------------------|----------|----------|---------------|
| A.P. ... | 31.90 | 1 | ✓ | 31.90 | 31" | 31.00 | 1 | ✓ | 31.00 |
| $\frac{1}{4}$ L from A.P. ... | 14.19 | 4 | ✓ | 56.76 | 14" | 14.00 | 4 | ✓ | 56.00 |
| $\frac{2}{4}$ L „ ... | 3.51 | 2 | ✓ | 7.02 | 3 $\frac{1}{2}$" | 3.50 | 2 | ✓ | 7.00 |
| Amidships ... | - | 4 | ✓ | - | 0" | - | 4 | ✓ | - |
| $\frac{3}{4}$ L from F.P. ... | 7.02 | 2 | ✓ | 14.04 | 8 $\frac{1}{4}$" | 8.25 | 2 | ✓ | 16.50 |
| $\frac{1}{4}$ L „ ... | 28.38 | 4 | ✓ | 113.52 | 33 $\frac{1}{4}$" | 33.25 | 4 | ✓ | 133.00 |
| F.P. ... | 63.80 | 1 | ✓ | 63.80 | 75" | 75.00 | 1 | ✓ | 75.00 |
| Total ... | | | ✓ | 287.04 | | | | | 318.50 |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{31.46}{18} \left(.75 - \frac{35.16}{174} \right) = -.70$

If limited on account of midship superstructure. $.166 / 200 \times .70 = -.58$

Mean actual sheer aft = **Deficient > 75% standard**

Mean standard sheer aft

Mean actual sheer forward = **Excess**

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = **.065**

„ „ aft of „ = **.50**

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **17.54**
Summer freeboard = **1.31**
Moulded draught (d) = **16.23**

Deduction for Tropical freeboard and addition for
Winter freeboard = $\frac{d}{4}$ inches = **4.06-4"**
Addition for Winter North Atlantic Freeboard (if required) = **6"**

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
 $= \frac{4}{4} = 4"$

TABULAR FREEBOARD corrected for Flush Deck (if required)

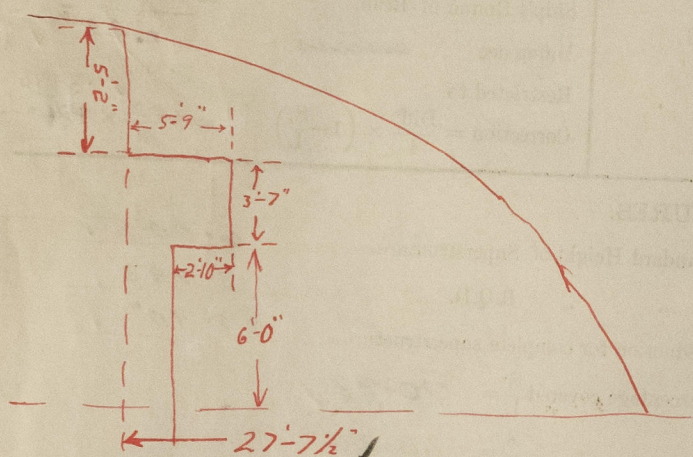
| | | |
|--|--------------------------|---------------------------------|
| Correction for coefficient | 1.77 + .68 = 1.45 | |
| | 1.36 | 1.36 |
| Depth Correction | 4.93 | - |
| Deduction for superstructures | - | 16.75 |
| Sheer correction | - | .58 |
| Round of Beam correction | - | .02 |
| Correction for Thickness of Deck amidships | - | - |
| Other corrections, scantlings, etc. | - | - |
| | 4.93 | 17.35 |
| | | -12.42 |
| | | Summer Freeboard = 15.75 |

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

| | | | |
|--|-----------|--------------------------------|--|
| Tropical Fresh Water Line above Centre of Disc | 8" | Tropical Fresh Water Freeboard | 0' - 7 $\frac{3}{4}$" |
| Fresh Water Line | 4" | Fresh Water | 0' - 11 $\frac{3}{4}$" |
| Tropical Line | 4" | Tropical | 0' - 11 $\frac{3}{4}$" |
| Winter Line below | 4" | Winter | 1' - 7 $\frac{3}{4}$" |
| Winter North Atlantic Line | 6" | Winter North Atlantic | 1' - 9 $\frac{3}{4}$" |

"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.



Forecasts

$$\begin{aligned} 9.58' \times 2.92' &= 27.97 \\ 3.58' \times 2.83' &= 10.13 \\ \hline 38.10 \\ 14.75 &= 2.58 \\ \hline 27.62 - 2.58 &= 25.04 \\ \frac{1}{2} Overhang &= 1.29 \\ \hline 26.33 \end{aligned}$$

Trade of ship. ✓

Names of sister ships. ✓

Builder's name and yard number R. Duncan & Co. Ltd. Govt Glasgow.

Owners.

Fee £ Feb. 1750.-



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Foundation