

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

| | | | | | |
|---|----------------------|---|--------------------|--------------------|-------------------------------------|
| Ship's Name <u>GEMMA.</u> | Official Number ✓ | Nationality and Port of Registry <u>DUTCH.</u> | Gross Tonnage ✓ | Date of Build ✓ | Port of Survey _____ |
| Moulded Dimensions: Length <u>383.00'</u> Breadth <u>62.50'</u> Depth <u>26.25'</u> <i>To centre of Rudder Stock</i> | | | | | Date of Survey <u>11.9.50.</u> |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons | | | | | Surveyor's Signature _____ |
| Coefficient of fineness for use with Tables. <u>.836 (Calculated).</u> | | | | | Particulars of Classification _____ |

| DEPTH FOR FREEBOARD (D). | DEPTH CORRECTION. | ROUND OF BEAM CORRECTION. |
|---|---|--|
| Moulded depth ... <u>26.25</u> ✓ | (a) Where D is greater than Table depth (D - Table depth) R = <u>(26.30 - 25.53) 2.946 = +2.27</u> ✓ | Moulded Breadth (B) <u>62.50</u> ✓ |
| Stringer plate ... <u>.64</u> ✓ | (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>.77</u> ✓ | Standard Round of Beam = $\frac{B \times 12}{50} = 15.00$ ✓ |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ | If restricted by superstructures ✓ | Ship's Round of Beam = <u>16.00</u> ✓ |
| Depth for Freeboard (D) = <u>26.30</u> | | Difference <u>+1.00</u> ✓ |
| | | Restricted to |
| | | Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{1}{4} \times .7626 = -.19$ ✓ |

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|---------------|-------------------|----------------------|
| Poop enclosed ... | <u>62.16</u> ✓ | <u>62.16</u> ✓ | <u>8.25</u> ✓ | ✓ | <u>62.16</u> ✓ |
| " overhang ... | | | | | |
| R.Q.D. enclosed ... | | | | | |
| " overhang ... | | | | | |
| Bridge enclosed ... | | | | | |
| " overhang aft ... | | | | | |
| " overhang forward ... | | | | | |
| F'cle enclosed ... | <u>28.75</u> ✓ | <u>28.75</u> ✓ | <u>7.50</u> ✓ | ✓ | <u>28.75</u> ✓ |
| " overhang ... | | | | | |
| Trunk aft ... | | | | | |
| " forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| " " forward ... | | | | | |
| Total ... | <u>90.91</u> ✓ | <u>90.91</u> ✓ | | | <u>90.91</u> ✓ |

Standard Height of Superstructure 7.33 ✓

" " R.Q.D. 5.773 ✓

Deduction for complete superstructure 40.87 ✓

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

" " $\frac{S_1}{L} = 23.74$ ✓

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

Percentage from Table, Line A. Tanker. 16.62 ✓
(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 = 40.87 × .1662 = 6.79 ✓

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|-------------------------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|----------------|
| A.P. ... | <u>48.30</u> ✓ | 1 | | <u>48.30</u> | <u>27.50</u> ✓ | <u>27.50</u> ✓ | 1 | | <u>27.50</u> ✓ |
| $\frac{1}{2}$ L from A.P. ... | <u>21.49</u> ✓ | 4 | | <u>85.96</u> | <u>3.00</u> ✓ | <u>3.00</u> ✓ | 4 | | <u>12.00</u> ✓ |
| $\frac{3}{8}$ L " ... | <u>5.315</u> ✓ | 2 | | <u>10.63</u> | - | - | 2 | | - |
| Amidships ... | - | 4 | | - | - | - | 4 | | - |
| $\frac{3}{8}$ L from F.P. ... | <u>10.63</u> ✓ | 2 | | <u>21.26</u> | - | - | 2 | | - |
| $\frac{1}{2}$ L " ... | <u>42.99</u> ✓ | 4 | | <u>171.96</u> | <u>1.50</u> ✓ | <u>1.50</u> ✓ | 4 | | <u>6.00</u> ✓ |
| F.P. ... | <u>96.60</u> ✓ | 1 | | <u>96.60</u> | <u>51.00</u> ✓ | <u>51.00</u> ✓ | 1 | | <u>51.00</u> ✓ |
| Total ... | | | | <u>434.71</u> | | | | | <u>96.50</u> ✓ |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{338.21}{18} (75 - .1187) = +11.86$ ✓
If limited on account of midship superstructure. ✓

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 26.30 ✓

Summer freeboard = 6.04 ✓

Moulded draught (d) = 20.26 ✓

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches =

Addition for Winter North Atlantic Freeboard (if required) =

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 = $\frac{\Delta}{40 T}$ inches

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

| | + | - |
|--|----------------|---------------|
| Depth Correction ... | <u>2.27</u> ✓ | - |
| Deduction for superstructures ... | - | <u>6.79</u> ✓ |
| Sheer correction ... | <u>11.86</u> ✓ | - |
| Round of Beam correction ... | - | <u>.19</u> ✓ |
| Correction for Thickness of Deck amidships ... | - | - |
| Other corrections, scantlings, etc. ... | - | - |

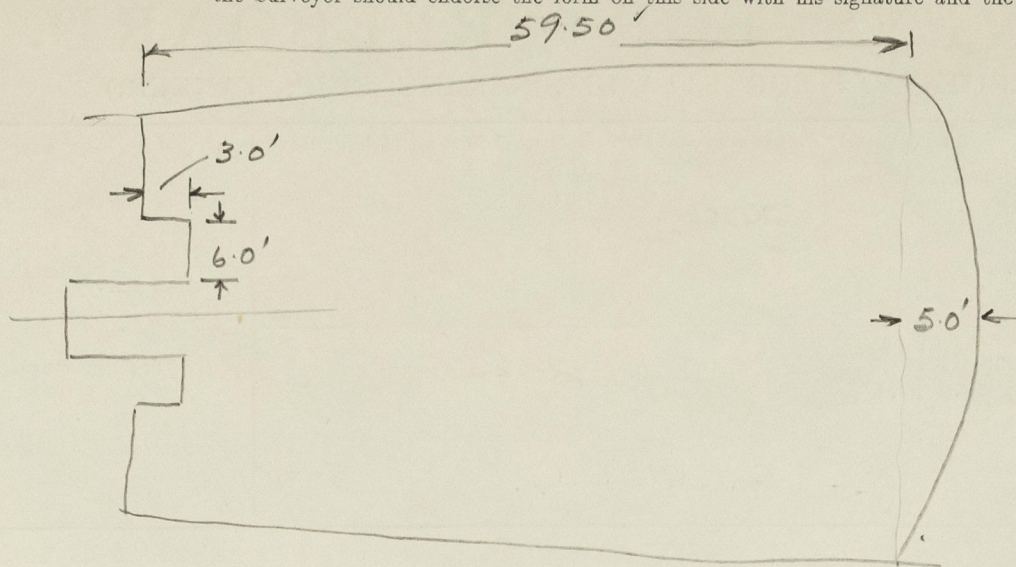
14.13 6.98 ✓ + 7.15 ✓

Summer Freeboard = 72.45 ✓

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, 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 " " ... | ... |

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.



$$\begin{array}{r}
 40 \\
 16 \\
 \hline
 24 @ 2.25' = 54.00' \\
 + \quad 2.50' = 2.50' \\
 + \quad 3.00' = 3.00' \\
 \hline
 59.50'
 \end{array}$$

$$\begin{array}{rcl}
 \text{Poop length at side} & = & 59.50' \\
 + \frac{2}{3} \times 5.0 & = & 3.33' \\
 \hline
 & = & 62.83' \\
 - \frac{3.0 \times 6.0}{27.0} & = & .67' \\
 \hline
 & = & 62.16' = \text{equivalent length incl.}
 \end{array}$$

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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Foundation