

Proposed alteration

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

| | | | | | |
|--|-----------------|----------------------------------|---------------|---------------|---------------------------------|
| Ship's Name <i>Crawns</i> <i>530/1.</i> | Official Number | Nationality and Port of Registry | Gross Tonnage | Date of Build | Port of Survey |
| Moulded Dimensions: Length <i>516.0'</i> Breadth <i>46.0'</i> Depth <i>19.0'</i> | | | | | Date of Survey <i>20/12/48.</i> |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth tons | | | | | Surveyor's Signature |
| Coefficient of fineness for use with Tables <i>.77 assumed</i> | | | | | Particulars of Classification |

| DEPTH FOR FREEBOARD (D). | DEPTH CORRECTION. | ROUND OF BEAM CORRECTION. |
|--|--|--|
| Moulded depth <i>19.0</i> | (a) Where D is greater than Table depth (D-Table depth) R = | Moulded Breadth (B) <i>46.00</i> |
| Stringer plate <i>.04</i> | (b) Where D is less than Table depth (if allowed) (Table depth-D) R = | Standard Round of Beam = $\frac{B \times 12}{50} =$ <i>11.04"</i> |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <i>✓</i> | <i>(21.07 - 19.04) 2.43 = -4.93"</i> <i>✓</i> | Ship's Round of Beam = <i>11.00"</i> |
| Depth for Freeboard (D) = <i>19.04</i> | If restricted by superstructures <i>4.93 x 4.00 = 19.66"</i> <i>-2.96"</i> | Difference <i>.04"</i> |
| | | Restricted to |
| | | Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.04}{4} \times .25 = .01$ <i>✓</i> |

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) | |
|----------------------------|-------------------------|--|--------------|-------------------|----------------------|---|
| Poop enclosed | | | | | | Standard Height of Superstructure <i>6.66'</i> <i>✓</i> |
| „ overhang | | | | | | „ „ R.Q.D. <i>4.880'</i> <i>✓</i> |
| R.Q.D. enclosed | <i>93.00</i> | <i>93.00</i> | <i>4.00'</i> | <i>4/4.88</i> | <i>76.23</i> | Deduction for complete superstructure <i>36.40"</i> <i>✓</i> |
| „ overhang | | | | | | Percentage covered $\frac{S}{L} =$ <i>41.46</i> <i>✓</i> |
| Bridge enclosed | | | | | | „ „ $\frac{S_1}{L} =$ <i>78.50</i> <i>✓</i> |
| „ overhang aft | | | | | | „ „ $\frac{E}{L} =$ <i>58.40</i> <i>✓</i> |
| „ overhang forward | | | | | | Percentage from Table, Line A. <i>Tanker 50.24</i> <i>✓</i> |
| F'cle enclosed | <i>38.00</i> | <i>38.00</i> | <i>7.00'</i> | <i>✓</i> | <i>38.00</i> | (corrected for absence of forecastle (if required)) <i>✓</i> |
| „ overhang | | | | | | Percentage from Table, Line B. <i>✓</i> |
| Trunk aft | | <i>117.09</i> | <i>4.00'</i> | <i>4/6.66</i> | <i>70.32</i> | (corrected for absence of forecastle (if required)) <i>✓</i> |
| „ forward | | | | | | Interpolation for bridge less than .2L (if required) <i>✓</i> |
| Tonnage opening aft | <i>✓</i> | <i>✓</i> | | | | Deduction = <i>36.40 x .5024 = -18.29"</i> <i>✓</i> |
| „ „ forward | | | | | | |
| Total | <i>131.00</i> | <i>248.09</i> | | | <i>184.55</i> | |

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product | |
|---------------------------------|-------------------|----------|---|---------------|-----------------|--------------------|----------|---|---------------|---|
| A.P. | <i>41.60</i> | <i>1</i> | | <i>41.60</i> | <i>59.60</i> | <i>59.60</i> | <i>1</i> | | <i>59.60</i> | Mean actual sheer aft = <i><.1</i> |
| $\frac{1}{2}L$ from A.P. | <i>18.57</i> | <i>4</i> | | <i>74.04</i> | <i>.70</i> | <i>.70</i> | <i>4</i> | | <i>2.80</i> | Mean standard sheer aft = <i><.1</i> |
| $\frac{3}{4}L$ „ | <i>4.575</i> | <i>2</i> | | <i>9.15</i> | <i>✓</i> | <i>✓</i> | <i>2</i> | | <i>✓</i> | Mean actual sheer forward = <i><.1</i> |
| Amidships | <i>✓</i> | <i>4</i> | | <i>✓</i> | <i>✓</i> | <i>✓</i> | <i>4</i> | | <i>✓</i> | Mean standard sheer forward = <i><.1</i> |
| $\frac{1}{2}L$ from F.P. | <i>9.15</i> | <i>2</i> | | <i>18.30</i> | <i>✓</i> | <i>✓</i> | <i>2</i> | | <i>✓</i> | Length of enclosed superstructure forward of amidships = <i>✓</i> |
| $\frac{3}{4}L$ „ | <i>37.02</i> | <i>4</i> | | <i>148.08</i> | <i>19.02</i> | <i>19.02</i> | <i>4</i> | | <i>76.08</i> | „ „ aft of „ = <i>✓</i> |
| F.P. | <i>83.20</i> | <i>1</i> | | <i>83.20</i> | <i>65.20</i> | <i>65.20</i> | <i>1</i> | | <i>65.20</i> | |
| Total | | | | <i>374.37</i> | | | | | <i>203.68</i> | |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{170.69}{18} \left(\frac{.75 - .2073}{1.75} \right) = +5.15"$ *✓*

If limited on account of midship superstructure. *✓*

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>19.04</i> | Ft. |
| Summer freeboard = <i>2.60</i> | |
| Moulded draught (d) = <i>16.44</i> | |
| 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 | △ = |
| 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 $\frac{.77 + .65}{1.36} = 1.45/1.36$ | 44.30" <i>✓</i> |
| Depth Correction | 47.23" <i>✓</i> |
| Deduction for superstructures | |
| Sheer correction | |
| Round of Beam correction | |
| Correction for Thickness of Deck amidships | |
| Other corrections, scantlings, etc. | |
| Summer Freeboard = <i>31.13"</i> | |

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 „ „ |