

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR <sup>MOTOR</sup>STEAMER, SAILING SHIP, TANKER.)

|  |                                  |   |                              |                              |  |
|--|----------------------------------|---|------------------------------|------------------------------|--|
| Ship's Name<br><b>"NEOTHAUMA"</b>  | Official Number<br><b>180877</b> | Nationality and Port of Registry<br><b>BRITISH<br/>LONDON</b> | Gross Tonnage<br><b>8229</b> | Date of Build<br><b>1946</b> | Port of Survey<br><b>GLASGOW</b>   |
| Moulded Dimensions: Length <b>461.0</b> Breadth <b>59.0</b> Depth <b>34.0</b><br>TO CENTRE OF RUDDER STOCK |                                  |   |                              |                              | Date of Survey<br><b>WHILE BUILDING</b>  |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth<br><b>12247</b> tons               |                                  |   |                              |                              | Surveyor's Signature<br><b>26 Thomson</b>  |
| Coefficient of fineness for use with Tables<br><b>.790</b>   |                                  |   |                              |                              | Particulars of Classification<br><b>+ 100 A1</b><br>"CARRYING PETROLEUM IN BULK" |

| Depth for Freeboard (D).  | Depth correction.   | Round of Beam correction.  |
|---|---|--|
| Moulded depth ... .. <b>34.0</b>  | (a) Where D is greater than Table depth<br>(D - Table depth) R =<br><b>(34.07 - 30.73) x 3 = +10.02</b> | Moulded Breadth (B) <b>59.0</b>  |
| Stringer plate ... .. <b>.07</b>  | (b) Where D is less than Table depth (if allowed)<br>(Table depth - D) R =<br><b>-</b>                  | Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>14.16</b>   |
| Sheathing on exposed deck<br>$T \left( \frac{L-S}{L} \right) =$ <b>NONE</b> | If restricted by superstructures  | Ship's Round of Beam = <b>14.34</b>  |
| Depth for Freeboard (D) = <b>34.07</b>                                      |   | Difference <b>.59</b>  |
|   |   | Restricted to  |
|   |   | Correction = $\frac{\text{Diff}^*}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <b>.59 x .5729 = -.08</b> |

## DEDUCTION FOR SUPERSTRUCTURES.

|                                    | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height     | Height Correction | Effective Length (E) |  |
|------------------------------------|-------------------------|--|------------|-------------------|----------------------|--|
| Poop enclosed <i>equivalent</i>    | <b>96.05</b>            | <b>96.05</b>                                 | <b>7.6</b> | <b>-</b>          | <b>96.05</b>         | Standard Height of Superstructure <b>7.5</b>         |
| " overhang ...                     |                         |  |            |                   |                      | " " R.Q.D. <b>42</b>                                 |
| R.Q.D. enclosed                    |                         |  |            |                   |                      | Deduction for complete superstructure                |
| " overhang                         |                         |  |            |                   |                      | Percentage covered $\frac{S}{L} =$ <b>43.128</b>     |
| Bridge enclosed. <i>equivalent</i> | <b>47.20</b>            | <b>47.20</b>                                 | <b>7.6</b> | <b>-</b>          | <b>47.20</b>         | " " $\frac{S_1}{L} =$ <b>42.80</b>                   |
| " overhang aft                     | <b>8.00</b>             | <b>6.00</b>                                  |            |                   | <b>6.00</b>          | " " $\frac{E}{L} =$ <b>42.80</b>                     |
| " overhang forward                 | <b>7.50</b>             | <b>5.62</b>                                  |            |                   | <b>5.62</b>          | Percentage from Table, Line A. <b>Tanker 33.8</b>    |
| F'cle enclosed                     | <b>48.04</b>            | <b>48.04</b>                                 | <b>7.6</b> | <b>-</b>          | <b>48.04</b>         | (corrected for absence of forecastle (if required))  |
| " overhang                         |                         |  |            |                   |                      | Percentage from Table, Line B.                       |
| Trunk aft                          |                         |  |            |                   |                      | (corrected for absence of forecastle (if required))  |
| " forward                          |                         |  |            |                   |                      | Interpolation for bridge less than .2L (if required) |
| Tonnage opening aft                |                         |  |            |                   |                      | Deduction = <b>42 x .338 = -14.20</b>                |
| " " forward                        | <b>8.7</b>              | <b>6.91</b>                                  |            |                   | <b>6.91</b>          |  |
| Total                              | <b>199.29</b>           | <b>197.29</b>                                |            |                   | <b>197.29</b>        |  |

## SHEER CORRECTION.

| Station                       | Standard Ordinate | S | M | Product       | Actual Ordinate | Effective Ordinate | S | M | Product       |  |
|-------------------------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|---------------|--|
| A.P. ...                      | <b>56.10</b>      | 1 |   | <b>56.10</b>  | <b>56.50</b>    | <b>56.50</b>       | 1 |   | <b>56.50</b>  | Mean actual sheer aft =                                  |
| $\frac{1}{2}$ L from A.P. ... | <b>24.96</b>      | 4 |   | <b>99.84</b>  | <b>25.25</b>    | <b>25.25</b>       | 4 |   | <b>101.00</b> | Mean standard sheer aft =                                |
| $\frac{2}{3}$ L " ...         | <b>6.17</b>       | 2 |   | <b>12.34</b>  | <b>5.25</b>     | <b>5.25</b>        | 2 |   | <b>10.50</b>  | } Deficient  |
| Amidships ...                 | <b>-</b>          | 4 |   | <b>-</b>      | <b>-</b>        | <b>-</b>           | 4 |   | <b>-</b>      |  |
| $\frac{2}{3}$ L from F.P. ... | <b>12.34</b>      | 2 |   | <b>24.68</b>  | <b>11.87</b>    | <b>11.87</b>       | 2 |   | <b>23.74</b>  | Mean actual sheer forward =                              |
| $\frac{1}{2}$ L " ...         | <b>49.92</b>      | 4 |   | <b>199.68</b> | <b>49.25</b>    | <b>49.25</b>       | 4 |   | <b>197.00</b> | Mean standard sheer forward =                            |
| F.P. ...                      | <b>112.20</b>     | 1 |   | <b>112.20</b> | <b>113.25</b>   | <b>113.25</b>      | 1 |   | <b>113.25</b> | Length of enclosed superstructure forward of amidships = |
| Total                         |                   |   |   | <b>504.84</b> |                 |                    |   |   | <b>501.99</b> | " " aft of " =   |

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - \frac{S}{2L}}{.75} \right) = \frac{2.85}{18} \left( \frac{.75 - .218}{.75} \right) = +.08$

If limited on account of midship superstructure.

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

|  |  |   |              |
|--|--|---|--------------|
| <b>Deduction for Tropical Freeboard.</b>   | <b>Deduction for Fresh Water.</b>                            | <b>TABULAR FREEBOARD</b> corrected for Fresh Deck (if required) |              |
| <b>Addition for Winter and Winter North Atlantic Freeboard.</b>  | Displacement in salt water at summer load water line         | Correction for coefficient                                      | <b>77.95</b> |
| Depth to Freeboard Deck = <b>34.07</b>   | $\Delta =$ <b>16849</b>                                      | $\frac{.79 + .68}{1.36} = \frac{1.47}{1.36}$                    | <b>84.26</b> |
| Summer freeboard = <b>6.67</b>   | Tons per inch immersion at summer load water line            | Depth Correction ... ..   |              |
| Moulded draught (d) = <b>27.40</b>   | T = <b>56.0</b>  | Deduction for superstructures ... ..                            |              |
| Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>6.85 = 6.85</b> | Deduction = $\frac{\Delta}{40T}$ inches = <b>7.52 = 7.52</b> | Sheer correction ... ..   |              |
| Addition for Winter North Atlantic Freeboard (if required) = <b>6.85 + 4.61 = 11.46 = 11.46</b>                | $\Delta$ <b>16807</b> <b>56.0</b>                            | Round of Beam correction ... ..                                 |              |
|  | $\Delta$ <b>17184</b> <b>56.5</b>                            | Correction for Thickness of Deck amidships ... ..               |              |
|  |  | Other corrections, scantlings, etc. ... ..                      |              |
|  |  | Summer Freeboard = <b>80.08</b>                                 |              |

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

|   |                |                                       |                 |
|---|----------------|---------------------------------------|-----------------|
| Tropical Fresh Water Line above Centre of Disc ... .. | <b>14 1/4"</b> | Tropical Fresh Water Freeboard ... .. | <b>5-5 3/4"</b> |
| Fresh Water Line " " ... ..                           | <b>7 1/2"</b>  | Fresh Water " " ... ..                | <b>6-0 1/2"</b> |
| Tropical Line " " ... ..                              | <b>6 3/4"</b>  | Tropical " " ... ..                   | <b>6-1 1/4"</b> |
| Winter Line below " " ... ..                          | <b>6 3/4"</b>  | Winter " " ... ..                     | <b>7-2 3/4"</b> |
| Winter North Atlantic Line " " ... ..                 | <b>11 1/2"</b> | Winter North Atlantic " " ... ..      | <b>7-7 1/2"</b> |



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.

Survey Request Form is forwarded herewith.

This vessel is an oil tanker and has been built in accordance with the approved plans.

The lifts of the keel plate in this vessel are included.

Plans of midship section, profile & decks (2 plans) are enclosed for reference.

Trade of ship International

Names of sister ships "NUTTALLIA" Builders No 79

Builder's name and yard number Highswort S. B. Co Ltd. No 82

Owners Anglo-Saxon Petroleum Co Ltd.

Fee £ 19-0-0.



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