

36665<sup>6</sup>  
Index. No. 36665.  
(For London Office only).

Basis computation for C.S. with T.O. aft.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

|   |                 |  |               |                              |  |
|---|-----------------|--|---------------|------------------------------|--|
| Ship's Name<br><b>EMPIRE BAXTER</b>   | Official Number | Nationality and Port of Registry<br><b>British,<br/>Barrow</b> | Gross Tonnage | Date of Build<br><b>1941</b> | Port of Survey   |
| Moulded Dimensions: Length <b>425'-6 1/2"</b> Breadth <b>56'-0"</b> Depth <b>27'-9"</b>   |                 |  |               |                              | Date of Survey <b>18.10.41</b>   |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>12000</b> tons |                 |  |               |                              | Surveyor's Signature   |
| Coefficient of fineness for use with Tables <b>.747</b>                                   |                 |  |               |                              | Particulars of Classification <b>+100A1<br/>with freeboard<br/>computed.</b> |

|   |   |  |
|---|---|--|
| <b>Depth for Freeboard (D).</b><br>Moulded depth ... <b>27.75</b><br>Stringer plate ... <b>.60</b> ... <b>.05</b><br>Sheathing on exposed deck<br>$T \left( \frac{L-S}{L} \right) =$ <b>✓</b><br>Depth for Freeboard (D) = <b>27.80</b> | <b>Depth correction.</b><br>(a) Where D is greater than Table depth<br>(D - Table depth) R = <b>✓</b><br>(b) Where D is less than Table depth (if allowed)<br>(Table depth - D) R = <b>(28.37 - 27.80) × 3 = -1.71"</b><br>If restricted by superstructures | <b>Round of Beam correction.</b><br>Moulded Breadth (B) <b>56.00'</b><br>Standard Round of Beam = $\frac{B \times 12}{50} =$ <b>13.44"</b><br>Ship's Round of Beam = <b>14.00</b><br>Difference <b>Excess .56</b><br>Restricted to<br>Correction = $\frac{\text{Diff}^*}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <b><math>\frac{.56}{4} \times .0061 = \text{Nil}</math></b> |
|---|---|--|

## DEDUCTION FOR SUPERSTRUCTURES.

|                         | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height | Height Correction | Effective Length (E) |  |
|-------------------------|-------------------------|--|--------|-------------------|----------------------|--|
| Poop enclosed ...       | 42.75                   | 42.75  | 9.08'  | ✓                 | 42.75                | Standard Height of Superstructure <b>7.5'</b>                |
| .. overhang ...         |                         |  |        |                   |                      | .. R.Q.D. <b>✓</b>   |
| R.Q.D. enclosed ...     |                         |  |        |                   |                      | Deduction for complete superstructure <b>42.00"</b>          |
| .. overhang ...         |                         |  |        |                   |                      | Percentage covered $\frac{S}{L} =$ <b>100.20</b>             |
| Bridge enclosed ...     | 377.63                  | 377.63                                       | 9.08'  | ✓                 | 377.63               | .. $\frac{S_1}{L} =$ <b>99.39</b>                            |
| .. overhang aft ...     |                         |  |        |                   |                      | .. $\frac{E}{L} =$ <b>99.39</b>                              |
| .. overhang forward ... |                         |  |        |                   |                      | Percentage from Table, Line A. <b>99.25</b>                  |
| Fore enclosed ...       |                         |  |        |                   |                      | (corrected for absence of forecastle (if required)) <b>✓</b> |
| .. overhang ...         |                         |  |        |                   |                      | Percentage from Table, Line B. <b>✓</b>                      |
| Trunk aft ...           |                         |  |        |                   |                      | (corrected for absence of forecastle (if required)) <b>✓</b> |
| .. forward ...          |                         |  |        |                   |                      | Interpolation for bridge less than 2L (if required) <b>✓</b> |
| Tonnage opening aft ... | 5.16                    | <b>1.58</b>                                  |        |                   | 1.58                 | Deduction = <b>42.00 × .9925 = -41.69"</b>                   |
| .. forward ...          |                         |  |        |                   |                      |  |
| Total ...               | 425.54                  | 422.96                                       |        |                   | 422.96               |  |

## SHEER CORRECTION.

| Station             | Standard Ordinate | S M | Product | Actual Ordinate +19 | Effective Ordinate | S M | Product |
|---------------------|-------------------|-----|---------|---------------------|--------------------|-----|---------|
| A.P. ...            | 52.55             | 1   | 52.55   | 54                  | 73.00              | 1   | 73.00   |
| 1/2 L from A.P. ... | 23.385            | 4   | 93.54   | 24.25               | 32.48              | 4   | 129.92  |
| 3/8 L ..            | 5.78              | 2   | 11.56   | 6.25                | 8.03               | 2   | 16.06   |
| Amidships ...       | -                 | 4   | -       | -                   | -                  | 4   | -       |
| 3/8 L from F.P. ... | 11.56             | 2   | 23.12   | 12.00               | 13.97              | 2   | 27.94   |
| 1/2 L ..            | 46.775            | 4   | 187.10  | 47.75               | 56.51              | 4   | 226.04  |
| F.P. ...            | 105.11            | 1   | 105.11  | 108.00              | 127.00             | 1   | 127.00  |
| Total ...           |                   |     | 471.98  | +19                 |                    |     | 599.96  |

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{126.98}{18} \times .25 = -1.76"$

If limited on account of midship superstructure. **✓**

Mean actual sheer aft = **Excess.**

Mean standard sheer aft

Mean actual sheer forward = **Excess.**

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = **✓**

.. aft of .. = **✓**

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **27.80**

Summer freeboard = **3.19**

Moulded draught (d) = **24.61**

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

Δ =

Tons per inch immersion at summer load water line

T =

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

|  | + | -     |
|--|---|-------|
| Depth Correction                           | - | 1.71  |
| Deduction for superstructures              | - | 41.69 |
| Sheer correction                           | - | 1.76  |
| Round of Beam correction                   | - | -     |
| Correction for Thickness of Deck amidships | - | -     |
| Other corrections, scantlings, etc.        | - | -     |
| Summer Freeboard                           | - | 38.28 |

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

|                                   |  |  |
|-----------------------------------|--|--|
| Draught as CS/T.O. = <b>24.61</b> | Tropical Fresh Water Line above Centre of Disc ... |  |
| + thickness = <b>1.50</b>         | Fresh Water Line ..                                |  |
| Scantling draught = <b>26.11</b>  | Tropical Line ..                                   |  |
|                                   | Winter Line below ..                               |  |
|                                   | Winter North Atlantic Line ..                      |  |

|                                    |  |
|------------------------------------|--|
| Tropical Fresh Water Freeboard ... |  |
| Fresh Water ..                     |  |
| Tropical ..                        |  |
| Winter ..                          |  |
| Winter North Atlantic ..           |  |