

Rpt. C.11 (Comp.).

BLUE CROSS. 35395.

Index. No. 35394.  
(For London Office only).

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

|   |                                   |   |                               |                                |   |
|---|-----------------------------------|---|-------------------------------|--------------------------------|---|
| Ship's Name<br><b>BLUE RIVER.</b>   | Official Number<br><b>155295.</b> | Nationality and Port of Registry<br><b>BRITISH.<br/>MONTREAL.</b> | Gross Tonnage<br><b>1770.</b> | Date of Build<br><b>1930-7</b> | Port of Survey <b>MONTREAL.</b>         |
| Moulded Dimensions: Length <b>248.00'</b> Breadth <b>43.50'</b> Depth <b>19.89.</b>   |                                   |   |                               |                                | Date of Survey <b>5TH APRIL 1937.</b>   |
| Moulded displacement at moulded draught = 85 per cent. of <b>4403</b> tons <b>FW.</b> |                                   |   |                               |                                | Surveyor's Signature <i>Geo. Allen.</i> |
| Coefficient of fineness for use with Tables <b>.903.</b>                              |                                   |   |                               |                                | Particulars of Classification           |

|  |  |   |
|--|--|---|
| <b>Depth for Freeboard (D).</b><br>Moulded depth (VIRTUAL) ... <b>19.09</b><br>Stringer plate $\frac{3}{8}'' + \frac{5}{8}''$ DOUBLING ... <b>.08</b><br>Sheathing on exposed deck<br>$T \left( \frac{L-S}{L} \right) = \text{NONE}$ ✓<br>Depth for Freeboard (D) = <b>19.17</b> | <b>Depth correction.</b><br>(a) Where D is greater than Table depth<br>(D - Table depth) R =<br>$(19.17 - 16.53) 1.908 = + 5.04''$<br>$2.64$<br>(b) Where D is less than Table depth (if allowed)<br>(Table depth - D) R = ✓<br>If restricted by superstructures ✓ | <b>Round of Beam correction.</b><br>Moulded Breadth (B)<br>Standard Round of Beam = $\frac{B \times 12}{50} =$<br>Ship's Round of Beam = <b>12.00''</b><br>Difference <b>ASSUMED STANDARD IN</b><br>Restricted to <b>ASCERTAINING VIRTUAL</b><br>Correction = $\frac{\text{Diff.}}{4} \times \left( 1 - \frac{S_1}{L} \right)$ <b>MOULDED DEPTH.</b><br><b>NIL.</b> |
|--|--|---|

## DEDUCTION FOR SUPERSTRUCTURES.

|                         | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|--------|-------------------|----------------------|
| Poop enclosed ...       |                         |  |        |                   |                      |
| „ overhang ...          |                         |  |        |                   |                      |
| R.Q.D. enclosed ...     |                         |  |        |                   |                      |
| „ overhang ...          |                         |  |        |                   |                      |
| Bridge enclosed ...     |                         |  |        |                   |                      |
| „ overhang aft ...      |                         |  |        |                   |                      |
| „ overhang forward ...  |                         |  |        |                   |                      |
| Fore enclosed ...       |                         |  |        |                   |                      |
| „ overhang ...          |                         |  |        |                   |                      |
| Trunk aft ...           |                         |  |        |                   |                      |
| „ forward ...           |                         |  |        |                   |                      |
| Tonnage opening aft ... |                         |  |        |                   |                      |
| „ „ forward ...         |                         |  |        |                   |                      |
| Total ...               |                         |  |        |                   |                      |

FLUSH DECK.

|   |   |
|---|---|
| Standard Height of Superstructure                   | ✓ |
| „ „ R.Q.D.  | ✓ |
| Deduction for complete superstructure               | ✓ |
| Percentage covered $\frac{S}{L} =$                  | ✓ |
| „ „ $\frac{S_1}{L} =$                               | ✓ |
| „ „ $\frac{E}{L} =$                                 | ✓ |
| Percentage from Table, Line A.                      | ✓ |
| (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 =   | ✓ |

## VIRTUAL SHEER CORRECTION.

| Station                      | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|------------------------------|-------------------|---|---|---------|-----------------|--------------------|---|---|---------|
| A.P. ...                     | 34.80             | 1 |   | 34.80   | 13.80           | 13.80              | 1 |   | 13.80   |
| $\frac{1}{4}L$ from A.P. ... | 15.485            | 4 |   | 61.94   | -               | -                  | 4 |   | -       |
| $\frac{2}{4}L$ „ ...         | 3.83              | 2 |   | 7.66    | -               | -                  | 2 |   | -       |
| Amidships ...                | -                 | 4 |   | -       | -               | -                  | 4 |   | -       |
| $\frac{3}{4}L$ from F.P. ... | 7.66              | 2 |   | 15.32   | -               | -                  | 2 |   | -       |
| $\frac{1}{4}L$ „ ...         | 30.97             | 4 |   | 123.88  | -               | -                  | 4 |   | -       |
| F.P. ...                     | 69.60             | 1 |   | 69.60   | 16.92           | 16.92              | 1 |   | 16.92   |
| Total ...                    |                   |   |   | 313.20  |                 |                    |   |   | 30.72   |

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{282.48}{18} \times .75 = + 11.77''$$

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><br><b>Addition for Winter and Winter North Atlantic Freeboard.</b><br>Depth to Freeboard Deck = <b>19.97</b><br>Summer freeboard = <b>5.44</b><br>Moulded draught (d) = <b>14.53</b><br>Deduction for Tropical freeboard and Addition for Winter freeboard = $\frac{d}{4}$ inches = <b>3.63 = 3<math>\frac{3}{4}</math>''</b><br>Addition for Winter North Atlantic Freeboard (if required) = $\frac{d}{2} = 7.26 = 7\frac{1}{4}''$ | <b>Deduction for Fresh Water.</b><br>Displacement in salt water at summer load water line<br>$\Delta =$ ✓<br>Tons per inch immersion at summer load water line<br>$T =$ ✓<br>Deduction = $\frac{\Delta}{40T}$ inches = ✓ | <b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required)<br>Correction for coefficient $\frac{.903 + .68}{1.36} = \frac{1.583}{1.36}$<br><table style="width: 100%;"> <tr> <td></td> <td>+</td> <td>-</td> </tr> <tr> <td>Depth Correction</td> <td>5.04</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures</td> <td>-</td> <td>-</td> </tr> <tr> <td>Sheer correction</td> <td>11.77</td> <td>-</td> </tr> <tr> <td>Round of Beam correction</td> <td>-</td> <td>-</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td>9.60</td> <td>-</td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td>-</td> <td>-</td> </tr> <tr> <td></td> <td><b>26.41</b></td> <td><b>+ 26.41''</b></td> </tr> </table> Summer Freeboard = <b>65.13''</b><br><b>5/8'' DOUBLING ON</b> |  | + | - | Depth Correction | 5.04 | - | Deduction for superstructures | - | - | Sheer correction | 11.77 | - | Round of Beam correction | - | - | Correction for Thickness of Deck amidships | 9.60 | - | Other corrections, scantlings, etc. | - | - |  | <b>26.41</b> | <b>+ 26.41''</b> |
|  | +  | -   |  |   |   |                  |      |   |                               |   |   |                  |       |   |                          |   |   |  |      |   |                                     |   |   |  |              |                  |
| Depth Correction   | 5.04   | -   |  |   |   |                  |      |   |                               |   |   |                  |       |   |                          |   |   |  |      |   |                                     |   |   |  |              |                  |
| Deduction for superstructures  | -  | -   |  |   |   |                  |      |   |                               |   |   |                  |       |   |                          |   |   |  |      |   |                                     |   |   |  |              |                  |
| Sheer correction   | 11.77  | -   |  |   |   |                  |      |   |                               |   |   |                  |       |   |                          |   |   |  |      |   |                                     |   |   |  |              |                  |
| Round of Beam correction   | -  | -   |  |   |   |                  |      |   |                               |   |   |                  |       |   |                          |   |   |  |      |   |                                     |   |   |  |              |                  |
| Correction for Thickness of Deck amidships   | 9.60   | -   |  |   |   |                  |      |   |                               |   |   |                  |       |   |                          |   |   |  |      |   |                                     |   |   |  |              |                  |
| Other corrections, scantlings, etc.  | -  | -   |  |   |   |                  |      |   |                               |   |   |                  |       |   |                          |   |   |  |      |   |                                     |   |   |  |              |                  |
|  | <b>26.41</b>   | <b>+ 26.41''</b>  |  |   |   |                  |      |   |                               |   |   |                  |       |   |                          |   |   |  |      |   |                                     |   |   |  |              |                  |

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

-9 JUN 1939

INTERMEDIATE

|  |   |
|--|---|
| Tropical Fresh Water Line above Centre of Disc | ✓ |
| Fresh Water Line                               | ✓ |
| Tropical Line                                  | ✓ |
| Winter Line below                              | ✓ |
| Winter North Atlantic Line                     | ✓ |

|                                |   |
|--------------------------------|---|
| Tropical Fresh Water Freeboard | ✓ |
| Fresh Water                    | ✓ |
| Tropical                       | ✓ |
| Winter INTERMEDIATE            | ✓ |
| Winter North Atlantic          | ✓ |

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MARKING FORM  
18 AUG 1939

RECEIVED