

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

13 FEB 1952

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

|   |                      |                                       |                    |                    |  |
|---|----------------------|---------------------------------------|--------------------|--------------------|--|
| Ship's Name<br><b>Denny, No 1460</b>  | Official Number<br>✓ | Nationality and Port of Registry<br>✓ | Gross Tonnage<br>✓ | Date of Build<br>✓ | Port of Survey<br><b>Glasgow.</b>  |
| Moulded Dimensions: Length <b>460'-0"</b> Breadth <b>63'-0"</b> Depth <b>30'-9" + 40'-3"</b>    |                      |                                       |                    |                    | Date of Survey<br>✓  |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>15,100</b> tons S.W. |                      |                                       |                    |                    | Surveyor's Signature<br><b>W. Malcolm</b>                                    |
| Coefficient of fineness for use with Tables <b>.698</b> ✓                                       |                      |                                       |                    |                    | Particulars of Classification<br><b>100A1 with freeboards (contemplated)</b> |

|                                       |              |   |                                    |  |                              |
|---------------------------------------|--------------|---|------------------------------------|--|------------------------------|
| DEPTH FOR FREEBOARD (D). <b>30.75</b> |              | DEPTH CORRECTION.   |                                    | ROUND OF BEAM CORRECTION.  |                              |
| Moulded depth ...                     | <b>30.9</b>  | (a) Where D is greater than Table depth (D-Table depth) R =           | <b>(30.78 - 30.67) 3 = +0.33</b> ✓ | Moulded Breadth (B)  | <b>63'-0"</b>                |
| Stringer plate ...                    | <b>.03</b>   | (b) Where D is less than Table depth (if allowed) (Table depth-D) R = |                                    | Standard Round of Beam = $\frac{B \times 12}{50}$                              | <b>15.12</b>                 |
| Sheathing on exposed deck             | <b>none</b>  |   |                                    | Ship's Round of Beam   | <b>15.34</b>                 |
| $T \left( \frac{L-S}{L} \right) =$    |              | If restricted by superstructures                                      |                                    | Difference   | <b>.63</b>                   |
| Depth for Freeboard (D) =             | <b>30.78</b> |   |                                    | Restricted to  |                              |
|                                       |              |   |                                    | Correction = $\frac{\text{Diff}^*}{4} \times \left( 1 - \frac{S_1}{L} \right)$ | <b>= .63/4 x .0048 = NIL</b> |

## DEDUCTION FOR SUPERSTRUCTURES.

|                     | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height     | Height Correction | Effective Length (E) |
|---------------------|-------------------------|--|------------|-------------------|----------------------|
| Poop enclosed ...   | <b>39'-0"</b>           | <b>39.00</b>                                 |            |                   | <b>39.00</b>         |
| " overhang ...      | <b>5 1/2</b>            | <b>.23</b>                                   |            |                   | <b>.23</b>           |
| R.Q.D. enclosed ... | <b>.46</b>              |  |            |                   |                      |
| " overhang ...      |                         |  |            |                   |                      |
| Bridge enclosed ... |                         |  | <b>9.5</b> |                   |                      |
| " overhang aft      |                         |  |            |                   |                      |
| " overhang forward  |                         |  |            |                   |                      |
| Fore enclosed ...   | <b>416'-0"</b>          | <b>416.00</b>                                |            |                   | <b>416.00</b>        |
| " overhang ...      | <b>5 1/2</b>            | <b>.35</b>                                   |            |                   | <b>.35</b>           |
| Trunk aft ...       | <b>.46</b>              |  |            |                   |                      |
| " forward ...       | <b>4.08</b>             | <b>1/2 DIFF.</b>                             |            |                   |                      |
| Tonnage opening aft | <b>4.1</b>              | <b>2.21</b>                                  |            |                   | <b>2.21</b>          |
| " " forward         |                         |  |            |                   |                      |
| Total ...           | <b>4460'-0"</b>         | <b>457.79</b>                                |            |                   | <b>457.79</b>        |

|  |              |
|--|--------------|
| Standard Height of Superstructure                    | <b>7.5</b>   |
| " " R.Q.D.   | <b>42</b>    |
| Deduction for complete superstructure                | <b>42</b>    |
| Percentage covered $\frac{S}{L} = 100$               |              |
| " " $\frac{S_1}{L} =$                                | <b>99.52</b> |
| " " $\frac{E}{L} =$                                  | <b>99.40</b> |
| Percentage from Table, Line A. & B                   | <b>99.40</b> |
| (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 = $42.00 \times .9940 =$                   | <b>41.75</b> |

## SHEER CORRECTION.

| Station             | Standard Ordinate | S        | M             | Product       | Actual Ordinate | Effective Ordinate | S             | M | Product |
|---------------------|-------------------|----------|---------------|---------------|-----------------|--------------------|---------------|---|---------|
| A.P. ...            | <b>56.00</b>      | <b>1</b> | <b>56.00</b>  | <b>60.00</b>  | <b>84.00</b>    | <b>1</b>           | <b>84.00</b>  |   |         |
| 1/8 L from A.P. ... | <b>24.92</b>      | <b>4</b> | <b>99.68</b>  | <b>27.00</b>  | <b>37.38</b>    | <b>4</b>           | <b>149.52</b> |   |         |
| 2/8 L " ...         | <b>6.16</b>       | <b>2</b> | <b>12.32</b>  | <b>7.25</b>   | <b>9.24</b>     | <b>2</b>           | <b>18.48</b>  |   |         |
| Amidships ...       | <b>-</b>          | <b>4</b> | <b>-</b>      | <b>-</b>      | <b>-</b>        | <b>4</b>           | <b>-</b>      |   |         |
| 3/8 L from F.P. ... | <b>12.32</b>      | <b>2</b> | <b>24.64</b>  | <b>13.63</b>  | <b>15.84</b>    | <b>2</b>           | <b>31.68</b>  |   |         |
| 1/8 L " ...         | <b>49.84</b>      | <b>4</b> | <b>199.36</b> | <b>54.00</b>  | <b>64.08</b>    | <b>4</b>           | <b>256.32</b> |   |         |
| F.P. ...            | <b>112.00</b>     | <b>1</b> | <b>112.00</b> | <b>120.00</b> | <b>144.00</b>   | <b>1</b>           | <b>144.00</b> |   |         |
| Total ...           |                   |          | <b>504.00</b> | <b>+24</b>    |                 |                    | <b>684.00</b> |   |         |

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{180.00}{18} \times .25 = -2.50$

If limited on account of midship superstructure.

Mean actual sheer aft = **Excess**

Mean standard sheer aft = **Excess**

Mean actual sheer forward = **Excess**

Mean standard sheer forward = **Excess**

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

" " aft of " = **CGS**

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **30.78**

Summer freeboard = **3.96**

Moulded draught (d) = **26.82**

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **6.71 - 6 3/4**

## Addition for Winter North Atlantic Freeboard (if required)=

## Deduction for Fresh Water.

Displacement in salt water at summer load water line **(27'-0")**

$\Delta =$  **15,650**

Tons per inch immersion at summer load water line

$T =$  **56.0**

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

= **6.99**

= **7"**

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.698 + .68}{1.36} = 1.378$

Depth Correction ... **.33**

Deduction for superstructures ... **41.75**

Sheer correction ... **2.50**

Round of Beam correction ... **-**

Correction for Thickness of Deck amidships ... **-**

Other corrections, scantlings, etc. ... **-**

**90.20**

**91.40**

**33**

**44.25**

**43.92**

Summer Freeboard = **47.48**

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

Tropical Fresh Water Line above Centre of Disc **13 3/4**

Fresh Water Line " " **7**

Tropical Line " " **6 3/4**

Winter Line below " " **6 3/4**

Winter North Atlantic Line " " **-**

Tropical Fresh Water Freeboard **2'-9 3/4**

Fresh Water " **3'-4 1/2**

Tropical " **3'-4 3/4**

Winter " **4'-6 1/4**

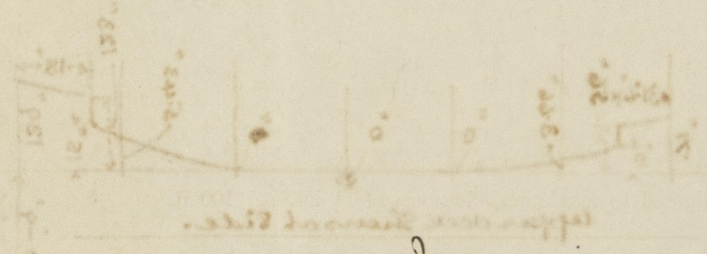
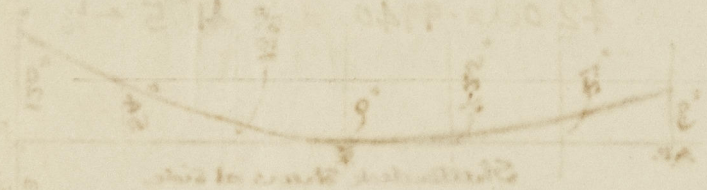
Winter North Atlantic " **-**



N<sup>o</sup> 1460.

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.

$$\frac{B_1 - b}{B_1} = \frac{52 - 22}{52} = \frac{30}{52} = > .5.$$



Trade of ship International

Names of sister ships 1461, 1468.

Builder's name and yard number Wm Denny & Bros. N<sup>o</sup> 1460.

Owners A. Pappadakis.

Fee £           

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