

21 JUL 1932

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(For London Office only.)

Rpt. C.11.

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

|   |  |                               |                          |                              |   |
|---|--|-------------------------------|--------------------------|------------------------------|---|
| Computation of Freeboard for Steamer, Sailing Ship, Tanker                              |  |                               |                          |                              | Port of Survey <u>Hull</u>                  |
| having <u>Quarter Deck, Bridge &amp; Forecastle</u>                                     |  |                               |                          |                              | Date of Survey <u>19/July/1932</u>          |
| (Type of Superstructures.)  |  |                               |                          |                              | Name of Surveyor <u>M. Malcolm</u>          |
| Ship's Name <u>ST. RONALD</u>   | Nationality and Port of Registry <u>British Dundee</u> | Official Number <u>144705</u> | Gross Tonnage <u>504</u> | Date of Build <u>1921-10</u> | Particulars of Classification <u>+100A1</u> |
| Moulded Dimensions: Length <u>165.06</u> Breadth <u>25.16</u> Depth <u>11.9</u>         |  |                               |                          |                              | S.S. LK. No. 3-12.27.                       |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>859</u> tons |  |                               |                          |                              |   |
| Coefficient of fineness for use with Tables <u>.725</u> (assumed)                       |  |                               |                          |                              |   |

|                                  |              |  |                                      |  |  |
|----------------------------------|--------------|--|--------------------------------------|--|--|
| Depth for Freeboard (D)          |              | Depth correction   |                                      | Round of Beam correction   |  |
| Moulded depth ...                | <u>11.75</u> | (a) Where D is greater than Table depth<br>(D-Table depth) R =           | <u>(11.79-11.00) 1.269 = + 1.00"</u> | Moulded Breadth (B)  | <u>25.16</u>   |
| Stringer plate ...               | <u>.35</u>   | (b) Where D is less than Table depth (if allowed)<br>(Table depth-D) R = | <u>✓</u>                             | Standard Round of Beam = $\frac{B \times 12}{50}$                            | <u>6.04"</u>   |
| Sheathing on exposed deck        |              | If restricted by superstructures   | <u>✓</u>                             | Ship's Round of Beam   | <u>6.4"</u>  |
| T $\left(\frac{L-S}{L}\right)$ = | <u>none</u>  |  |                                      | Difference   | <u>.21"</u>  |
| Depth for Freeboard (D) =        | <u>11.79</u> |  |                                      | Restricted to  |  |
|                                  |              |  |                                      | Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right)$ | <u>= <math>\frac{.21^2}{4} \times .2176 = -.01"</math></u> |

## DEDUCTION FOR SUPERSTRUCTURES.

|                              | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height     | Height Correction | Effective Length (E) |  |
|------------------------------|-------------------------|--|------------|-------------------|----------------------|--|
| Poop enclosed ...            |                         |  |            |                   |                      | Standard Height of Superstructure <u>6.00</u>        |
| " overhang ...               |                         |  |            |                   |                      | " " R.Q.D. <u>3.434</u>                              |
| R.Q.D. enclosed ...          | <u>95.5</u>             | <u>95.50</u>                                 | <u>3.6</u> | <u>✓</u>          | <u>95.50</u>         | Deduction for complete superstructure <u>22.51</u>   |
| " overhang ...               | <u>10.75</u>            | <u>10.75</u>                                 | <u>7.0</u> | <u>✓</u>          | <u>10.75</u>         | Percentage covered $\frac{S}{L} =$ <u>78.62%</u>     |
| Bridge enclosed ...          |                         |  |            |                   |                      | " " $\frac{S_1}{L} =$ <u>78.24%</u>                  |
| " overhang aft ...           |                         |  |            |                   |                      | " " $\frac{E}{L} =$ <u>78.24%</u>                    |
| " overhang forward ...       | <u>22.28</u>            | <u>22.28</u>                                 | <u>7.0</u> | <u>✓</u>          | <u>22.28</u>         | Percentage from Table, Line A. <u>73.13%</u>         |
| File enclosed ...            | <u>1.22</u>             | <u>.61</u>                                   |            |                   | <u>.61</u>           | (corrected for absence of forecastle (if required))  |
| " overhang <u>See sketch</u> |                         |  |            |                   |                      | 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 = <u>22.51 x 73.13 = 16.46"</u>            |
| " " forward                  |                         |  |            |                   |                      |  |
| Total ...                    | <u>129.75</u>           | <u>129.14</u>                                |            |                   | <u>129.14</u>        |  |

## SHEER CORRECTION.

| Station                       | Standard Ordinate | S | M | Product       | Actual Ordinate | Effective Ordinate | S | M | Product       | Mean actual sheer aft | Mean standard sheer aft |
|-------------------------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|---------------|-----------------------|-------------------------|
| A.P. ...                      | <u>26.51</u>      | 1 |   | <u>26.51</u>  | <u>41.2</u>     | <u>41.50</u>       | 1 |   | <u>41.29</u>  | <u>Excess</u>         |                         |
| $\frac{1}{2}$ L from A.P. ... | <u>11.80</u>      | 4 |   | <u>47.20</u>  | <u>19.2</u>     | <u>19.15</u>       | 4 |   | <u>76.60</u>  |                       |                         |
| $\frac{3}{8}$ L " ...         | <u>2.92</u>       | 2 |   | <u>5.84</u>   | <u>4.5</u>      | <u>4.78</u>        | 2 |   | <u>9.56</u>   | <u>Excess</u>         |                         |
| Amidships ...                 | <u>✓</u>          | 4 |   | <u>✓</u>      | <u>0</u>        | <u>✓</u>           | 4 |   | <u>✓</u>      |                       |                         |
| $\frac{3}{8}$ L from F.P. ... | <u>5.83</u>       | 2 |   | <u>11.66</u>  | <u>8.1</u>      | <u>7.30</u>        | 2 |   | <u>14.60</u>  |                       |                         |
| $\frac{1}{2}$ L " ...         | <u>23.59</u>      | 4 |   | <u>94.36</u>  | <u>29.0</u>     | <u>29.22</u>       | 4 |   | <u>116.88</u> |                       |                         |
| F.P. ...                      | <u>53.02</u>      | 1 |   | <u>53.02</u>  | <u>66.2</u>     | <u>66.50</u>       | 1 |   | <u>66.50</u>  |                       |                         |
| Total ...                     |                   |   |   | <u>238.59</u> |                 |                    |   |   | <u>326.43</u> |                       |                         |

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{87.84}{18} \left( .75 - \frac{3931}{165.06} \right) = -1.74"$

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.  | Deduction for Fresh Water.                           | TABULAR FREEBOARD corrected for Flush Deck (if required)                 |              |
| Addition for Winter and Winter North Atlantic Freeboard.   | Displacement in salt water at summer load water line | Correction for coefficient   | <u>17.61</u> |
| Depth to Freeboard Deck = <u>15.29</u>   | $\Delta =$   | $\frac{.68 + .725}{1.36} = \frac{1.405}{1.36}$                           | <u>18.19</u> |
| Summer freeboard = <u>3.67</u>   | Tons per inch immersion at summer load water line    | Depth Correction ...   | <u>1.00</u>  |
| Moulded draught (d) = <u>11.62</u>   | T =  | Deduction for superstructures ...  | <u>16.46</u> |
| Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>2.90 = 3"</u> | Deduction = $\frac{\Delta}{40 T}$ inches = <u>3"</u> | Sheer correction ...   | <u>1.74</u>  |
| Addition for Winter North Atlantic Freeboard (if required) = <u>2"</u>                                       |  | Round of Beam correction ...   | <u>.01</u>   |
|  |  | Correction for Thickness of Deck amidships height of Raised Quarter Deck | <u>42.00</u> |
|  |  | Other corrections, scantlings, etc. ...                                  | <u>43.00</u> |
|  |  | Summer Freeboard = <u>42.98 + 1.02 = 44.00</u>                           |              |

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

|  |            |                                    |                        |
|--|------------|------------------------------------|------------------------|
| Tropical Fresh Water Line above Centre of Disc ... | <u>3"</u>  | Tropical Fresh Water Freeboard ... | <u>3'-8" (limited)</u> |
| Fresh Water Line " " ...                           | <u>3"</u>  | Fresh Water " " ...                | <u>3'-5"</u>           |
| Tropical Line " " ...                              | <u>NIL</u> | Tropical " " ...                   | <u>3'-8" (limited)</u> |
| Winter Line below " " ...                          | <u>3"</u>  | Winter " " ...                     | <u>3'-11"</u>          |
| Winter North Atlantic Line " " ...                 | <u>5"</u>  | Winter North Atlantic " " ...      | <u>4'-1"</u>           |

23 JUL 1932

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MAKING FORM  
22 JUL 1932  
RECEIVEDMAKING FORM  
1 AUG 1932  
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002340-002351-0039 (1/2)



## 274

truck,  
rose space  
"angle  
corners

Fiddley gratings covered by strong steel hinged covers.  
Fiddley ventilators & coamings in efficient condition.  
Engine Room Sky light of steel, strongly constructed.

\_\_\_\_\_ none \_\_\_\_\_

None

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

|                  |  |
|------------------|--|
| <u>Idle Dh</u> : | 6" dia. coamings, '36" high x .26 to accomm. |
| 12" "            | " " " " '36" " x .3 to hoels.                |
| <u>Bde Dh</u> :  | 2, 6" G.V. vents '6" high, to accomm.        |
| <u>P.D Dh</u> :  | 12" dia. coamings '36" high x .33 to hoels.  |

All ventilators constructed in accordance with Rule.  
Wood plugs & canvas covers supplied.

| Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— |          |      |          |                   |
|---|----------|------|----------|-------------------|
| <u>Tide Sh.</u>   | 3½" dia. | S.N. | 5" high  | to fore peak tank |
| <u>H. Well</u>  | 3½" "    | "    | 7" "     | Hot S.B. tank     |
| <u>R.Q. Sh.</u>   | 3" "     | "    | 30" high | Hot S.B. tank     |
|   | 3" "     | "    | 8" "     | after peak tank   |

Satisfactory  
~~no~~ means of closing  
~~no~~ drifting holes.

— none —



Particulars of Scuppers and Sanitary Discharge Pipes :-

File. Sanitary discharge pipes lead above freeboard deck with storm valve at shell.  
R.Q. Deck. " " " " to shell below R.Q. Deck, with storm valve at ship's side.  
Scuppers in forward well 7"x4" & 10"x2" of funnel bar type.

Particulars of Side Scuttles :-

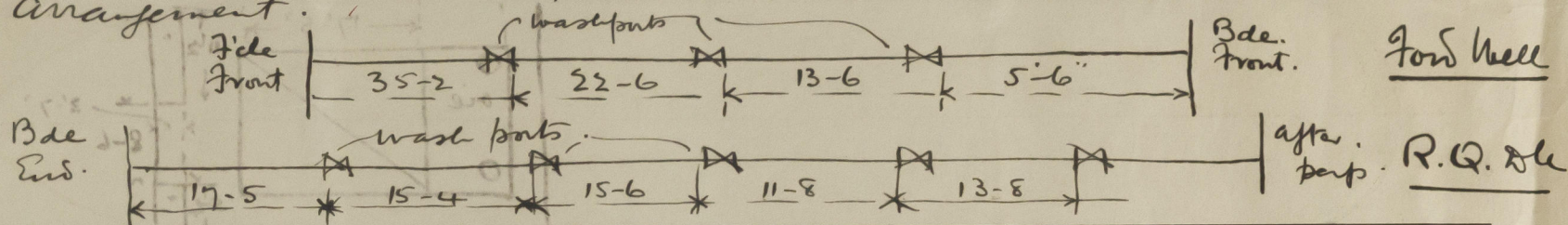
- In File & bridge tween decks fitted with hinged deadlights.  
 All side scuttles of substantial construction.

Particulars of Guard Rails

File Deck 3'0" high, 2 rail, stanchions spaced 4 feet apart.  
R.Q. Deck Steel bulwark 3'-3" high efficiently constructed & stayed.  
Bde. " " " " " "  
Forward well 4'-3" " " " "

Particulars of Gangways, Lifelines, etc. :-

On starboard side only, 4 stanchions fitted on hatch side, 4'0" high, with 2" manila rope from bde post to file post, secured to the bulkhead also suitable wood platforms at hatch end, ladders. An efficient arrangement.



Particulars of Freeing Arrangements.

|                         | Length of Bulwark | Height of Bulwark | Size of Freeing Ports   | Number each side                                      | Area each side                    | Rule area each side |
|-------------------------|-------------------|-------------------|---|---|-----------------------------------|---------------------|
| <u>After Well</u> ...   | 95.5'             | 3'-3"             | $\left\{ \begin{array}{l} 33" \times 21" \\ 21" \times 14" \end{array} \right.$ | $\left\{ \begin{array}{l} 2 \\ 5 \end{array} \right.$ | $\frac{20.5}{10.2} \text{ sq ft}$ | 19.1 sq ft          |
| <u>Forward Well</u> ... | 35'-2"            | 4'-3"             | 30" x 18"   | 3   | 11.25 sq ft                       | 10 sq ft            |

State position of each freeing port ... After Well :- 12" above deck edge.  
 (F. and A. position and height above deck edge) Forward Well :- 13" above deck edge.  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- Steel hinged shutter beach.  
 Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

|   | Coaming | Plating | Stiffeners      | Spacing | End Attachments of Stiffeners | Size of Openings                  | Height of Sills | Height of Casings |
|---|---------|---------|-----------------|---------|-------------------------------|-----------------------------------|-----------------|-------------------|
| Poop Bulkhead ...   |         |         |                 |         |                               |                                   |                 |                   |
| Raised Quarter Deck Bulkhead ...  |         |         |                 |         |                               | none                              | 1'              | -                 |
| Bridge, After Bulkhead ...  | .35     | .35     | 3 x 2 1/2 x 304 | 30"     | not accessible                | none                              | 1'              | -                 |
| Bridge, Forward Bulkhead ...  | .35     | .3      | 5 x 3 x 48 L    | 30"     | not accessible                | none                              | 1'              | 7'-0"             |
| Forecastle Bulkhead ...   | .26     | .26     | 3 x 2 1/2 x 3   | 30"     | none                          | 4'-6" x 2'                        | 18"             | 7'-0"             |
| Trunk, Aft ...  |         |         |                 |         |                               |                                   |                 |                   |
| Trunk, Forward ...  |         |         |                 |         |                               |                                   |                 |                   |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...                      | .35     | .3      | 22 x 22 x .3    | 21"     | bolt top                      | 4'-6" x 2' (A)<br>2' x 1'-10" (B) | 18"<br>48"      | 7'-0"             |
| Exposed Machinery Casings on Superstructure Decks ...                                   |         |         |                 |         |                               |                                   |                 |                   |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... |         |         |                 |         |                               |                                   |                 |                   |
| Deckhouses on Flush Deck Ships ...  |         |         |                 |         |                               |                                   |                 |                   |

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

|   |  |
|---|--|
| Poop Bulkhead ...   |  |
| Raised Quarter Deck Bulkhead ...  | ✓  |
| Bridge, After Bulkhead ...  | ✓  |
| Bridge, Forward Bulkhead ...  | ✓  |
| Forecastle Bulkhead ...   | Steel hinged doors to store + w.c. spaces, bolts, no.      |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...                      | hinged wood door to access 1 1/2" thick, spring lock, yes. |
| Exposed Machinery Casings on Superstructure Decks ...                                   | hinged steel doors, in horizontal helms, bolts, yes.       |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... | doors, closed by cleats & wedges, (in bulkhead casing)     |
| Deckhouses on Flush Deck Ships ...  | ✓  |



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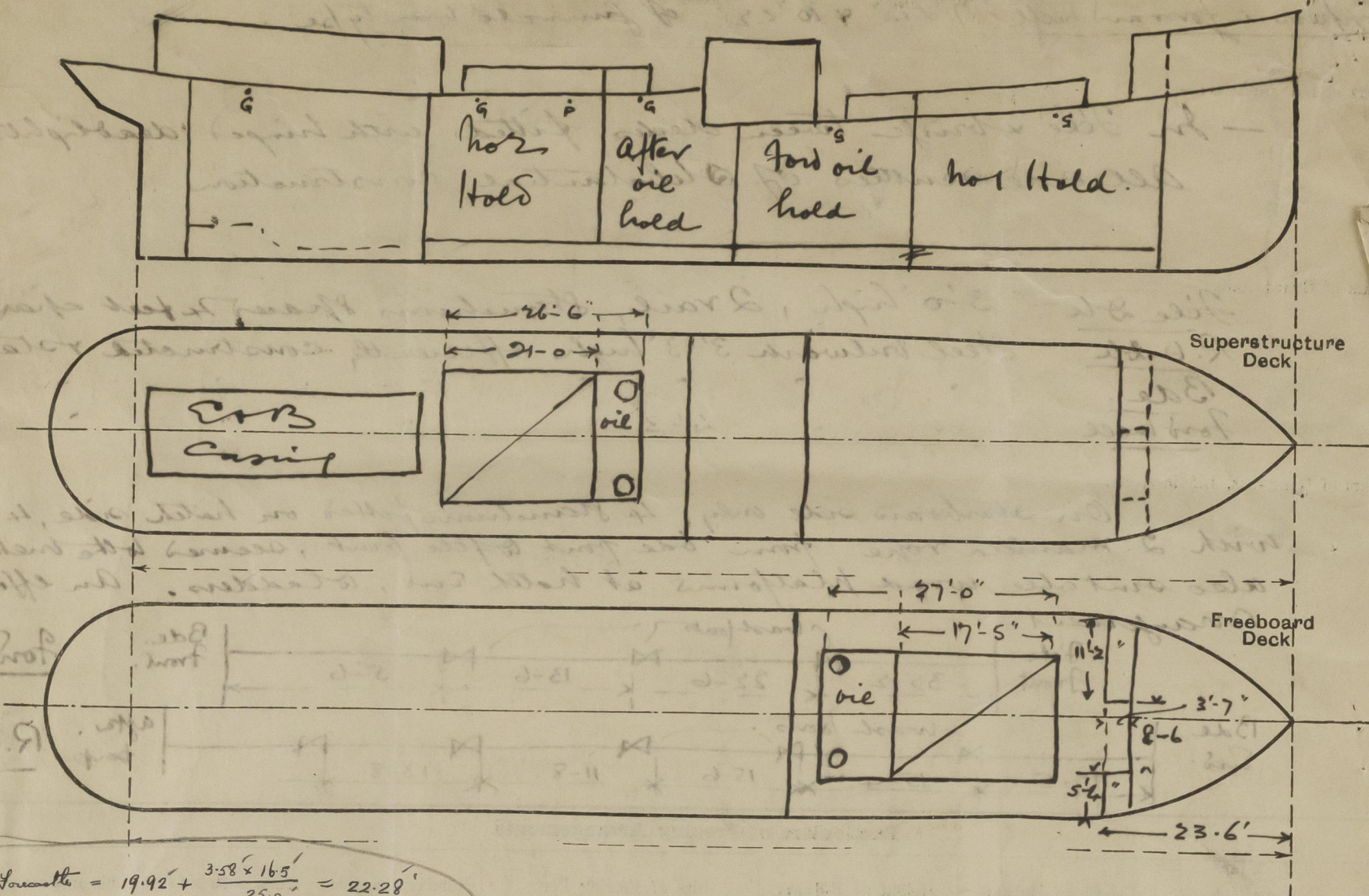
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Broughty

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—

S = gunmetal bar scupper.  
P = 2" pipe scupper.



$$\text{Forecastle} = 19.92 + \frac{3.58 \times 16.5}{25.0} = 22.28'$$

$$\text{Overhang} = 1.22' \text{ Allowed } .61'$$

State any special features in the construction of the ship:—

Inboard survey heeled afloat and in dry dock.

Part Special Survey, Not now heeled — examination of bottom rudder in dry dock, only.

Hatch way on Upper Deck, in fore, to store 2'-0" x 1'-9", wood covers 2 1/2" thick with wood deck, bearing 3" no cleats or battens.

Builder's name and yard number Larne P.B. Co. Ltd.

Names of sister ships

Owners Dumdee, Perth & London Shipping Co. Ltd.

Fee £ 6 : 16 : —

Received by me



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