

Rpt. C.11.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Index. No. **30993**  
(For London Office only.)

21 DEC 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having **POOP AND FORECASTLE CONNECTED BY RAISED CENTREPART.**

Port of Survey **ROTTERDAM.**

Date of Survey **16-12-1932**

Name of Surveyor **P. J. van der Wal**

Particulars of Classification **I 100 A.1**

**CANTILEVER FRAMED**  
**S.S. No. 2.31**

**OSLEBS HAUSEN** (Type of Superstructures.)

Ship's Name **ZEMBRA** Nationality and Port of Registry **German DUNKERQUE** Official Number **143962** Gross Tonnage **5097** Date of Build **1923-10**

Moulded Dimensions: Length **370.74** Breadth **43.00** Depth **29.10 1/4** HARBOUR DECK

Moulded displacement at moulded draught = 85 per cent. of moulded depth

Coefficient of fineness for use with Tables **.764**

### Depth for Freeboard (D)

Moulded depth ... **29.85**  
Stringer plate **HARBOUR DECK ... 60"** ... **.05**  
Sheathing on exposed deck  
 $T \left( \frac{L-S}{L} \right) =$   
Depth for Freeboard (D) = **29.90**

### Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R =  
 $(29.90 - 24.71) 2.852 = +14.80$   
**5.19**  
(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R =  
If restricted by superstructures

### Round of Beam correction

Moulded Breadth (B) **43.00 50.85**  
Standard Round of Beam =  $\frac{B \times 12}{50} = 12.20$   
Ship's Round of Beam **11.81**  
Difference **Deficient .39**  
Restricted to  
Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.39}{4} \times 2008 = +102$

### DEDUCTION FOR SUPERSTRUCTURES.

|                         | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height      | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|-------------|-------------------|----------------------|
| Poop enclosed ...       | <b>29.69</b>            | <b>29.69</b>                                 | <b>7.5</b>  |                   | <b>29.69</b>         |
| " overhang ...          | <b>107.72</b>           |  |             |                   |                      |
| R.Q.D. enclosed ...     | <b>232.89</b>           |  |             |                   |                      |
| " overhang ...          |                         |  |             |                   |                      |
| Bridge enclosed...      | <b>29.13</b>            | <b>29.13</b>                                 | <b>7.5</b>  |                   | <b>29.13</b>         |
| " overhang aft ...      |                         |  |             |                   |                      |
| " overhang forward      |                         |  |             |                   |                      |
| F'cle enclosed ...      | <b>16.56</b>            | <b>16.56</b>                                 | <b>5.43</b> | <b>7.21</b>       | <b>16.56</b>         |
| " overhang ...          |                         |  |             |                   |                      |
| Trunk aft ...           | <b>220.90</b>           |  |             |                   | <b>166.36</b>        |
| " forward ...           |                         |  |             |                   |                      |
| Tonnage opening aft ... |                         |  |             |                   |                      |
| " forward               |                         |  |             |                   |                      |
| Total ...               | <b>58.82</b>            | <b>296.28</b>                                |             |                   | <b>241.74</b>        |

Standard Height of Superstructure **7.21**

" " R.Q.D.

Deduction for complete superstructure **40.05**

Percentage covered  $\frac{S}{L} = 15.86$

"  $\frac{S_1}{L} = 79.92$

"  $\frac{E}{L} = 65.22$

Percentage from Table, Line A. **54.87**

(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) **No bridge**

Deduction = **- 21.97**

### SHEER CORRECTION.

| Station             | Standard Ordinate | S        | M             | Product      | Actual Ordinate PLOTTED | Effective Ordinate | S            | M        | Product      |
|---------------------|-------------------|----------|---------------|--------------|-------------------------|--------------------|--------------|----------|--------------|
| A.P. ...            | <b>47.07</b>      | <b>1</b> | <b>47.07</b>  | <b>21.26</b> | <b>21.26</b>            | <b>1</b>           | <b>21.26</b> | <b>1</b> | <b>21.26</b> |
| 1/2 L from A.P. ... | <b>20.94</b>      | <b>4</b> | <b>83.76</b>  | <b>4.00</b>  | <b>4.00</b>             | <b>4</b>           | <b>16.00</b> | <b>4</b> | <b>16.00</b> |
| 3/8 L " ...         | <b>5.18</b>       | <b>2</b> | <b>10.36</b>  | <b>0</b>     | <b>0</b>                | <b>2</b>           | <b>0</b>     | <b>2</b> | <b>0</b>     |
| Amidships ...       | <b>0</b>          | <b>4</b> | <b>0</b>      | <b>0</b>     | <b>0</b>                | <b>4</b>           | <b>0</b>     | <b>4</b> | <b>0</b>     |
| 3/8 L from F.P. ... | <b>10.36</b>      | <b>2</b> | <b>20.72</b>  | <b>0</b>     | <b>0</b>                | <b>2</b>           | <b>0</b>     | <b>2</b> | <b>0</b>     |
| 1/2 L " ...         | <b>41.89</b>      | <b>4</b> | <b>167.56</b> | <b>4.50</b>  | <b>4.50</b>             | <b>4</b>           | <b>18.00</b> | <b>4</b> | <b>18.00</b> |
| F.P. ...            | <b>94.14</b>      | <b>1</b> | <b>94.14</b>  | <b>37.41</b> | <b>37.41</b>            | <b>1</b>           | <b>37.41</b> | <b>1</b> | <b>37.41</b> |
| Total ...           |                   |          | <b>423.61</b> |              |                         |                    | <b>92.67</b> |          |              |

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{330.94}{18} \left( .75 - .0793 \right) = +12.33$

If limited on account of midship superstructure.

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 = **29.90**  
Summer freeboard = **5.97**  
Moulded draught (d) = **23.93**

### Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **5.98**

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

### Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

$T = 36.8$

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

=

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

Correction for coefficient  $\frac{.764 + .66}{1.36} \times \frac{1.444}{1.36}$

Depth Correction ... **14.80**

Deduction for superstructures ... **21.97**

Sheer correction ... **12.33**

Round of Beam correction... **.02**

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ...

**27.15 21.97 + 5.18**

Summer Freeboard = **71.66**

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

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

© 2021  
77.64

1906 Lloyd's Register  
Foundation



PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS |                      |  |                           |                           |                           |   |  |  |  |
|---|----------------------|--|---------------------------|---------------------------|---------------------------|---|--|--|--|
| Description of Hatchway                         |                      | I  | II                        | III                       | IV                        | V |  |  |  |
| Dimensions of Hatchway                          |                      | 13'3" x 26'2"                                  | 13'3" x 26'2"             | 31'7" x 26'2"             | 22'5" x 26'2"             |   |  |  |  |
| COAMINGS  | Height above Deck    | 3'3 1/4"                                       |                           |                           |                           |   |  |  |  |
|   | Thickness            | 4 1/2"   | 5 1/2"                    | 7 1/2"                    | 7 1/2"                    |   |  |  |  |
|   | Sides                | 3 1/2"   | 3 1/2"                    | 3 1/2"                    | 3 1/2"                    |   |  |  |  |
|   | Stiffeners           | 2 x 9 1/2" x 3 1/2" x 50"                      | 2 x 9 1/2" x 3 1/2" x 50" | 2 x 9 1/2" x 3 1/2" x 50" | 2 x 9 1/2" x 3 1/2" x 50" |   |  |  |  |
| HATCH BEAMS                                     | Number               | 1  | 4                         | 4                         | 4                         |   |  |  |  |
|   | Spacing              | 23'6" x 1.45"                                  | 23'6" x 1.45"             | 23'6" x 1.45"             | 23'6" x 1.45"             |   |  |  |  |
|   | Scantling and Sketch | 4 x 4 1/2" x 3' x 1.45"                        | 4 x 4 1/2" x 3' x 1.45"   | 4 x 4 1/2" x 3' x 1.45"   | 4 x 4 1/2" x 3' x 1.45"   |   |  |  |  |
|   | Bearing Surface      | SOLID. 17.1. SOCKETS. TAPERED BEARING 1" TO 2" |                           |                           |                           |   |  |  |  |
| FORE AND AFTERS                                 | Number               |  |                           |                           |                           |   |  |  |  |
|   | Spacing              |  |                           |                           |                           |   |  |  |  |
|   | Unsupported Lengths  |  |                           |                           |                           |   |  |  |  |
|   | Scantling and Sketch |  |                           |                           |                           |   |  |  |  |
| HATCH COVERS                                    | Material             | 2  | 2                         | 2                         | 2                         |   |  |  |  |
|   | Thickness            | 3 1/2"   | 3 1/2"                    | 3 1/2"                    | 3 1/2"                    |   |  |  |  |
|   | How fitted           | LONGITUDINALLY.                                | LONGITUDINALLY.           | LONGITUDINALLY.           | LONGITUDINALLY.           |   |  |  |  |
|   | Bearing Surface      | 2 1/4"   | 2 1/4"                    | 2 1/4"                    | 2 1/4"                    |   |  |  |  |
| Spacing of Cleats                               |                      | 24" NOT EXCEEDING                              | 24" NOT EXCEEDING         | 24" NOT EXCEEDING         | 24" NOT EXCEEDING         |   |  |  |  |
| Number of Tarpaulins                            |                      | 3  | 3                         | 3                         | 3                         |   |  |  |  |

\*Are wood fore and afters steel shod at all bearing surfaces? ✓  
 Are battens and wedges efficient and in good condition? YES  
 Are tarpaulins in good condition and in accordance with rule requirements? YES  
 Are lashings provided in accordance with rule requirements? STEEL W. LASHINGS AVAILABLE

Particulars of fiddle, funnel and ventilator coamings:— Carving, funnel, ventilator coamings and engineering by light of an efficient construction and in good condition. Carving protected by pop.

Particulars of Flush Bunker Scuttles:— Only 1 each side in forepeak. of a substantial construction. Bajonet jointed.

Particulars of Companionways:— Entrance crew's quarters. in strongly constructed deckhouse. Ordinary hinged steel doors, operated from both sides. Sills 18"

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— All ventilators situated on trunk, between latches. Dia. 15". Coaming 32" x 36". Hal caps & canvas covers are available. Construction Coaming complies with Rules.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— All airpipes situated on trunk, 2 1/2" x 3" x 25" and fitted with wood plugs.

Particulars of Gangway Cargo and Coaling Ports:— none fitted.

Particulars of Scuppers and Sanitary Discharge Pipes:—

Sanitary discharge pipes lead from spaces situated above the freeboard deck and are fitted with storm valves.

Particulars of Side Scuttles:— All situated above the freeboard deck, of a substantial construction and fitted with hinged steel deadlights.

Particulars of Guard Rails:— Round fore deck, 3 rails, twisted stanchions 3'-8" x 15" x 4" upperdeck, 3 " 3'-8" x 13" 10" fore deck ditto ditto Harboured stanchions in twisted sockets with chain core through.

Particulars of Gangways, Lifelines, etc.:— Transverse lifelines are available and it is a practice to fit same in rough weather to ensure a safe access to all parts necessary for the crew or for handling the vessel.

| Particulars of Freeing Arrangements.  |                   |                   |                       |                  |                |                     |
|---|-------------------|-------------------|-----------------------|------------------|----------------|---------------------|
|   | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
| After Well  |                   |                   |                       |                  |                |                     |
| Forward Well  |                   |                   |                       |                  |                |                     |
| State position of each freeing port (F. and A. position and height above deck edge) After Well:— Forward Well:— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Additional area where sheer is less than standard. |                   |                   |                       |                  |                |                     |

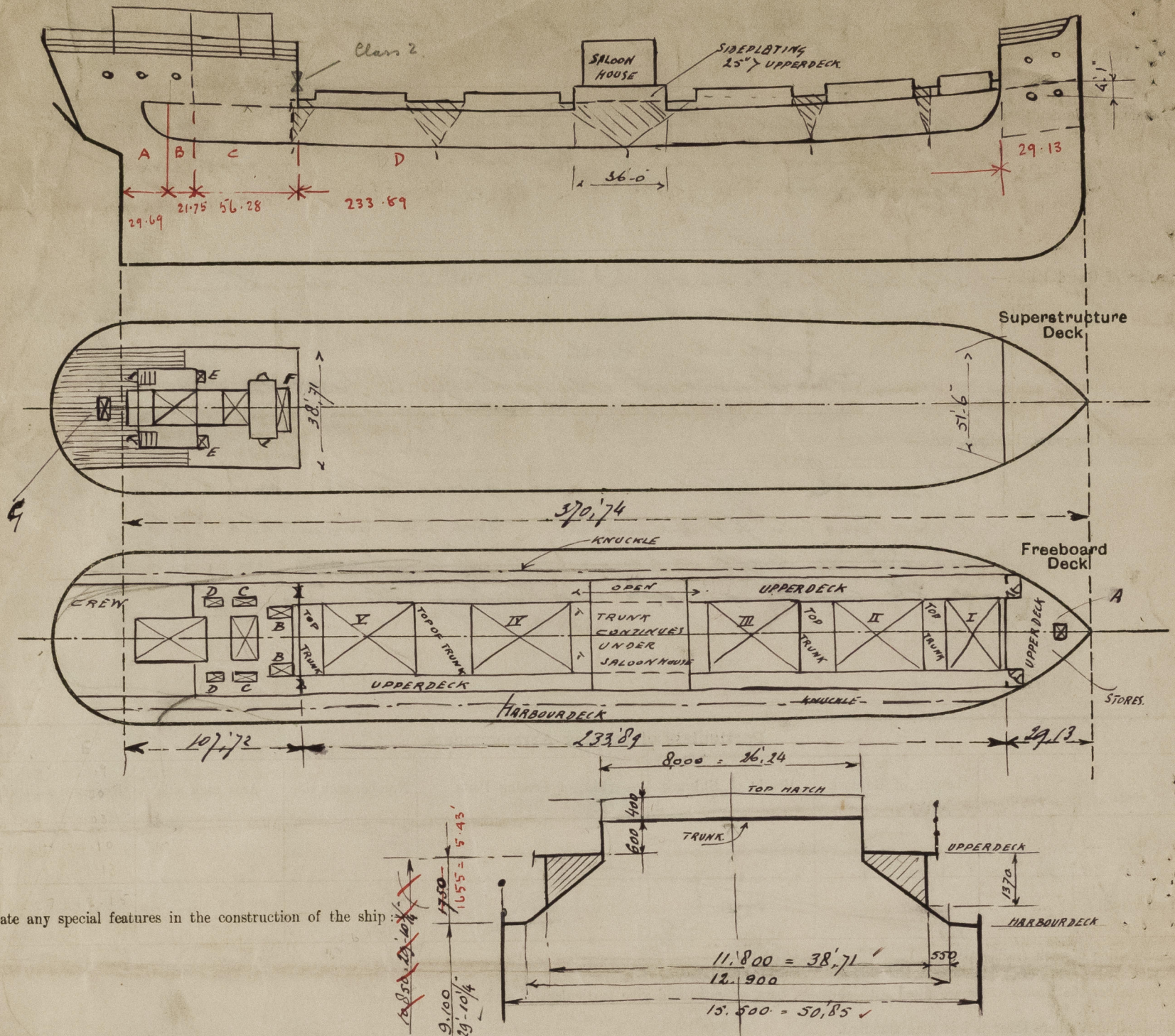
| Particulars of Superstructures, Trunks, Casings, Deckhouses.                        |           |         |                       |         |                               |                  |                 |                   |
|---|-----------|---------|-----------------------|---------|-------------------------------|------------------|-----------------|-------------------|
|   | Coaming   | Plating | Stiffeners            | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
| Poop Bulkhead   | VERTICAL  | 36"     | RA. 5' x 2 1/2" x 36" | 24"     | BRACKET.                      | 4'6" x 3'0"      | 18"             |                   |
| Raised Quarter Deck Bulkhead  | ✓         |         |                       |         |                               |                  |                 |                   |
| Bridge, After Bulkhead  | ✓         |         |                       |         |                               |                  |                 |                   |
| Bridge, Forward Bulkhead  | ✓         |         |                       |         |                               |                  |                 |                   |
| Forecastle Bulkhead   | VERTICAL  | 34"     | FLANGED. 2 1/2"       | 20"     | ✓                             | 4'8" x 2'0"      | 18"             |                   |
| Trunk, Aft  | ✓         |         |                       |         |                               |                  |                 |                   |
| Trunk, Forward  | ✓         |         |                       |         |                               |                  |                 |                   |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks                      | ✓         |         |                       |         |                               |                  |                 |                   |
| Exposed Machinery Casings on Superstructure Decks                                   | VERTICAL  | 30"     | 4' x 2 1/2" x 30"     | 26"     | ✓                             | 4'7" x 2'5"      | 18"             | 7'8"              |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | 18" x 36" | 30"     | 0"                    | 0"      | ✓                             | ✓                | ✓               |                   |
| Deckhouses on Flush Deck Ships  | ✓         |         |                       |         |                               |                  |                 |                   |

| Particulars of Closing Appliances (state if capable of being manipulated from both sides). |  |
|--|--|
| Poop Bulkhead  | 3" Stanchions in twisted E full height.                |
| Raised Quarter Deck Bulkhead   | ✓  |
| Bridge, After Bulkhead   | ✓  |
| Bridge, Forward Bulkhead   | ✓  |
| Forecastle Bulkhead  | Ordinary hinged steel doors, operated from both sides. |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks                             | ✓  |
| Exposed Machinery Casings on Superstructure Decks  | Ordinary hinged steel doors, operated from both sides. |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances        | ✓  |
| Deckhouses on Flush Deck Ships   |  |



# ZEMBRA.

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 shewn on the following sketches:—



State any special features in the construction of the ship:

Hatch A. inside 3'-0" x 3'-0" Coaming 14".  
 Coal hatches { B 8'-0" x 3'-3" }  
 { C in poop 6'-0" x 3'-3" } Coaming 8A. 7"  
 { D 6'-0" x 3'-3" } bearing surface 1/2"  
 Store hatch E on poop deck 4'-7" x 3'-0" Coaming 32" x 36"  
 Coal hatch F " 25'-0" x 5'-8" Coaming 32" x 38"  
 bearing surface 2"  
 Store hatch G " 4'-6" x 3'-6" Coaming 32" x 36"  
 Saloon house on elevated deck 25" above upper deck, but ends not open, only sides are plated.

Complete battening down arrangement.

Builder's name and yard number

J. Seebeck A. G. Rossummunde - J.

Names of sister ships

Owners

Soc. Commerciale de Nav.

Fee

163.20

Will be

received by me

Rotterdam

20<sup>th</sup> December 1932.

Exp. 5.00

over

J. van der Weel



© 2021

Lloyd's Register Foundation