

Rpt. C.11.

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship~~ ~~Tanker~~  
having Raised Quarter Deck, Bridge and Forecastle. Port of Survey HULL  
(Type of Superstructures.)  
Date of Survey 2nd September 1932.  
Ship's Name "Lowland" Nationality and Port of Registry Br. London Official Number 142363 Gross Tonnage 974 Date of Build 1911  
ex Noord Holland  
Name of Surveyor G. Knoffak.  
Moulded Dimensions: Length 216' Breadth 32'6" Depth 14'3"  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1802 tons  
Coefficient of fineness for use with Tables 72.3  
Particulars of Classification 100 A1.  
S.S. Rst. No 3-6-26  
S.S. Rst. No 1-31.

Depth for Freeboard (D) 14'3" Depth correction (a) Where D is greater than Table depth (D-Table depth) R = 0.45  
Stringer plate 0.45  
Sheathing on exposed deck ✓ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = (14.40 - 14.29) 1.661  
 $T \left( \frac{L-S}{L} \right) =$  ✓ = -0.18"  
Depth for Freeboard (D) = 14.29 If restricted by superstructures Yes, NIL.

## DEDUCTION FOR SUPERSTRUCTURES.

|                           | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height          | Height Correction | Effective Length (E) |   | Standard Height of Superstructure |
|---------------------------|-------------------------|--|-----------------|-------------------|----------------------|---|-----------------------------------|
| Poop enclosed ...         |                         |  |                 |                   |                      |   | <u>6.00</u>                       |
| " overhang ...            |                         |  |                 |                   |                      |   | " " R.Q.D. <u>3.773</u>           |
| R.Q.D. enclosed ...       | <u>75'</u>              | <u>75.00</u>                                 | <u>3'7 1/2"</u> | <u>3.625</u>      | <u>72.86</u>         | Deduction for complete superstructure               | <u>27.60</u>                      |
| " overhang ...            |                         |  |                 |                   |                      | Percentage covered $\frac{S}{L} =$                  | <u>72.74%</u>                     |
| Bridge enclosed...        | <u>58'12"</u>           | <u>58.12</u>                                 | <u>7'3"</u>     |                   | <u>58.12</u>         | " $\frac{S_1}{L} =$                                 | <u>72.48%</u>                     |
| " overhang aft ...        |                         |  |                 |                   |                      | " $\frac{E}{L} =$                                   | <u>71.14%</u>                     |
| " overhang forward        | <u>22'9 3/4"</u>        | <u>22.98</u>                                 | <u>7'3"</u>     |                   | <u>22.98</u>         | Percentage from Table, Line A.                      |                                   |
| F'cle enclosed <u>24'</u> | <u>24'</u>              | <u>24.00</u>                                 | <u>7'3"</u>     |                   | <u>24.00</u>         | (corrected for absence of forecastle (if required)) | <u>64.40%</u>                     |
| " overhang ...            | <u>1.07</u>             | <u>53</u>                                    |                 |                   | <u>53</u>            | Percentage from Table, Line B.                      |                                   |
| Trunk aft ...             |                         |  |                 |                   |                      | (corrected for absence of forecastle (if required)) |                                   |
| Tonnage opening aft ...   |                         |  |                 |                   |                      | Interpolation for bridge less than 2L (if required) |                                   |
| " forward                 |                         |  |                 |                   |                      | Deduction = <u>27.60 x 64.40%</u>                   | <u>= -17.74"</u>                  |
| Total ...                 | <u>157.12</u>           | <u>156.58</u>                                |                 |                   | <u>153.64</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>31.60</u>      | 1 |   | <u>31.60</u>  | <u>33.00</u>    | <u>33.00</u>       | 1 |   | <u>33.00</u>  |  |                             |
| 1/2 L from A.P. ... | <u>14.06</u>      | 4 |   | <u>56.24</u>  | <u>15.25</u>    | <u>15.40</u>       | 4 |   | <u>61.60</u>  | Mean actual sheer forward                                | Mean standard sheer forward |
| 3/4 L ...           | <u>3.48</u>       | 2 |   | <u>6.96</u>   | <u>4.00</u>     | <u>3.85</u>        | 2 |   | <u>7.70</u>   |  |                             |
| Amidships ...       |                   | 4 |   |               | <u>0</u>        | <u>✓</u>           | 4 |   |               | Length of enclosed superstructure forward of amidships = | <u>7.16</u>                 |
| 3/4 L from F.P. ... | <u>6.96</u>       | 2 |   | <u>13.92</u>  | <u>8.25</u>     | <u>8.29</u>        | 2 |   | <u>16.58</u>  | " aft of "   | <u>5.51</u>                 |
| 1/2 L ...           | <u>28.12</u>      | 4 |   | <u>112.48</u> | <u>33.00</u>    | <u>33.18</u>       | 4 |   | <u>132.72</u> |  |                             |
| F.P. ...            | <u>63.20</u>      | 1 |   | <u>63.20</u>  | <u>75.00</u>    | <u>75.00</u>       | 1 |   | <u>75.00</u>  |  |                             |
| Total ...           |                   |   |   | <u>284.40</u> |                 |                    |   |   | <u>326.60</u> |  |                             |

Correction = Difference between sums of products  $\left( \frac{75-S}{18} \right) = \frac{42.20}{18} (75 - 36.37) = -9.1"$   
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 = 14.29 Ft.  
Summer freeboard = 6.7  
Moulded draught (d) = 13.62  
Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 3.40 = 3 1/2"  
Addition for Winter North Atlantic Freeboard (if required) = 2"  
Deduction for Fresh Water. Displacement in salt water at summer load water line  $\Delta =$   
Tons per inch immersion at summer load water line  $T =$   
Deduction =  $\frac{\Delta}{40T}$  inches = 3 1/2"  
TABULAR FREEBOARD corrected for Flush Deck (if required)  
Correction for coefficient  $\frac{723 + 68}{1.36} = \frac{1403}{1.36}$   
Depth Correction ... 45  
Deduction for superstructures ... 17.74  
Sheer correction ... 91  
Round of Beam correction ... 82  
Correction for Thickness of Deck amidships ...  
Other corrections, scantlings, etc. ...  
Summer Freeboard = 8.00

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

|  |               |                                    |                     |
|--|---------------|------------------------------------|---------------------|
| Tropical Fresh Water Line above Centre of Disc ... | <u>7"</u>     | Tropical Fresh Water Freeboard ... | <u>0' - 8"</u>      |
| Fresh Water Line " " ...                           | <u>3 1/2"</u> | Fresh Water " " ...                | <u>0' - 1"</u>      |
| Tropical Line " " ...                              | <u>3 1/2"</u> | Tropical " " ...                   | <u>0' - 4 1/2"</u>  |
| Winter Line below " " ...                          | <u>3 1/2"</u> | Winter " " ...                     | <u>0' - 4 1/2"</u>  |
| Winter North Atlantic Line " " ...                 | <u>5 1/2"</u> | Winter North Atlantic " " ...      | <u>0' - 11 1/2"</u> |
|  |               |                                    | <u>1 - 1 1/2"</u>   |



## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS                                |   |                       |                          |              |              |  |                     |                                    |                                |                           |                        |
|--|---|-----------------------|--------------------------|--------------|--------------|--|---------------------|------------------------------------|--------------------------------|---------------------------|------------------------|
| Description of Hatchway  |   |                       | No.1                     | No.2         | No.3         | Hatch to Fore Hold, on Hiddlely Top, Bridge Deck | Bunker Hatch (Same) | Fore Peak Hatch on Forecastle Deck | Bunker Trimming Hatches on (4) | Stowage Room Hatch on (4) | R.O.D. AFT PEAK HATCH. |
| Dimensions of Hatchway   |   |                       | 18'9"x15'                | 19'7"x15'    | 30'x15'      | 12'x5'2"   | 12'x5'4"            | 22'x1'6"                           | 3'6"x2'                        | 1'8"x1'4"                 | 4'2"x3'6"              |
| COAMINGS   | { | Height above Deck     | 23" @ centre             | above bunks  | 3'3" high    | basing 3"  | Same                | 13"                                | 13 1/2"                        | 16 1/2"                   | 16"                    |
|  |   | Thickness             | 17" @ sides              | Same         | Same         | boaming #1                                       | Same                | 4"                                 | 3 1/4"                         | 3 1/4"                    | 3"                     |
|  |   | Stiffeners            | 4"                       | as           | as           | 35"  | Same                | 4"                                 | 3 1/4"                         | 3 1/4"                    | 3"                     |
|  |   | Brackets, Stays       | none                     | No.1         | 3 brackets   | none   | none                | 2 1/2" 1/2" no moulding            | none                           | none                      | none                   |
| HATCH BEAMS  | { | Number                | 5                        | 5            | 7            | none   | none                | ✓                                  | none                           | none                      | none                   |
|  |   | Spacing               | even                     | even         | even         | none   | none                | ✓                                  | none                           | none                      | none                   |
|  |   | Scantling and Sketch  | DA 3x3x4<br>25x4<br>18x4 | Same as No.1 | Same as No.1 | DA 3x3x4   | DA 3x3x4            | DA 3x3x4                           | DA 3x3x4                       | DA 3x3x4                  | DA 3x3x4               |
|  |   | Bearing Surface       | 2 1/2"                   | 2 1/2"       | 2 1/2"       | 2 1/2"   | 2 1/2"              | 2 1/2"                             | 2 1/2"                         | 2 1/2"                    | 2 1/2"                 |
| FORE AND AFTERS  | { | Number                | none                     | none         | none         | none   | none                | ✓                                  | none                           | none                      | none                   |
|  |   | Spacing               | none                     | none         | none         | none   | none                | ✓                                  | none                           | none                      | none                   |
|  |   | Unsupported Lengths   | none                     | none         | none         | none   | none                | ✓                                  | none                           | none                      | none                   |
|  |   | Scantling* and Sketch | none                     | none         | none         | none   | none                | ✓                                  | none                           | none                      | none                   |
| HATCH COVERS   | { | Material              | W. Wood                  | Same         | Same         | W. Wood  | W. Wood             | W. Wood                            | W. Wood                        | Steel                     | Steel                  |
|  |   | Thickness             | 2 1/2"                   | Same         | Same         | 2 1/2"   | 2 1/2"              | 2 1/2"                             | 2 1/2"                         | Cover with                | Hinged Cover           |
|  |   | How fitted            | 7x2                      | as           | as           | 7x2  | 7x2                 | as lid                             | 7x2                            | screwed                   | and                    |
|  |   | Bearing Surface       | 3                        | No.1         | No.1         | 1 1/2" 2 3/4"                                    | 1 1/2" 2 3/4"       | 1 3/4"                             | 1 3/4"                         | opening from inside       | 1 tarp                 |
| Spacing of Cleats  |   |                       | 24                       | Same as No.1 | 23"          | 30"  | 30"                 | 1 each side                        | 23"                            | 23"                       | 23"                    |
| Number of Tarpaulins   |   |                       | 2                        | as No.1      | 2            | 2  | 2                   | 2                                  | 2                              | 2                         | 2                      |
| *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? Yes                |   |                       |                          |              |              |  |                     |                                    |                                |                           |                        |

Particulars of fiddley, funnel and ventilator coamings:— Fiddley gratings covered by portable steel cover.  
Fiddley & funnel vents & coamings good: fiddley casing top is 3' above Bridge Dr.  
Engine Room skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

bone.

Particulars of Companionways:— 1 Steel companionway 4' x 3' x 7' high within Bridge or House, leading to Enc. Bridge Space Accom. 2 Teak wood doors 1 1/4" thick 5' 2" x 2', sill 13" fitted with spring locks opening both sides. 1 Steel Hood Companionway on Starbd. Side of Bridge Deck, 3' 6" x 2' 6" x 5' 3" high leading to Engineer's Accom. within Bridge Space; Teak wood door 1 1/2" thick 4' 3" x 2' sill 12" fitted with spring lock opening both sides.

| Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— |                     |        |                      |
|---|---------------------|--------|----------------------|
| 2 Vents on Forecastle Deck  | 8" dia x 3'6" x .35 | led to | Enc. & castle accom. |
| 24 " " Forewell "   | 15" " x 3'3" x .35  | " "    | Fore Hold Space      |
| 9 mushrooms on Bridge   | 7 1/2 " x 8' 6.3.   | " "    | Enc. Br. Spaces.     |
| 2 Vents on R.Q.D.   | 15" " x 3'3" x .35  | " "    | Aft Hold Space.      |
| 2 " " " "   | 15" " x 3' x .35    | " "    | " " "                |
| 1 " " " "   | 6" " x 2'6" x .3    | " "    | Tunnel "             |
| 1 mushroom " "  | 7 1/2 " x 8' 6.3.   | " "    | aft Peak Space.      |

Efficient temporary closing appliances ~~to~~ ~~be~~ ~~provided~~ ~~for~~

| Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— |              |              |                 |        |             |        |                 |            |  |
|---|--------------|--------------|-----------------|--------|-------------|--------|-----------------|------------|--|
| 1   | Wrought iron | air pipes on | forecastle deck | 2" dia | 7 1/2" high | led to | Fore Peak Tank. |            |  |
| 2   | "            | "            | freeboard       | 2 1/4" | 3 1/6"      | "      | No 1 BK         | "          |  |
| 2   | "            | "            | "               | 2 1/4" | 3 1/6"      | "      | No 2 "          | "          |  |
| 1   | "            | "            | R. Q.           | 2 1/4" | 10"         | "      | No 3 "          | "          |  |
| 1   | "            | "            | "               | 2 1/4" | 3 1/4"      | "      | No 4 "          | "          |  |
| 1   | "            | "            | "               | 2 1/4" | 9"          | "      | aft Peak        | "          |  |
| 3   | Cast Iron    | "            | Bridge          | 2"     | 2"          | led to | open bilges in  | Stokehold. |  |
| 2   | "            | "            | "               | 1 1/2" | 2"          | "      | "               | Bunker.    |  |

Particulars of Gangway Cargo and Coaling Ports:—

none



Particulars of Scuppers and Sanitary Discharge Pipes:—

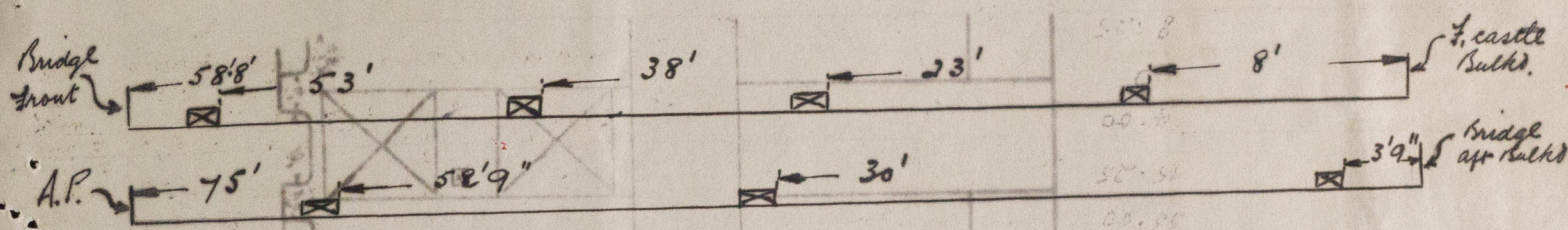
|                                   |          |                 |
|-----------------------------------|----------|-----------------|
| 3 Scuppers each side of fore well | 3" x 2½" | in gunwale bar. |
| 3 " " " " R.Q.D.                  | 3" x 2½" | " " " "         |

Particulars of Side Scuttles:—

Side scuttles in Forecastle and Bridge Space accomodation of substantial construction and fitted with deadlights.

| Particulars of Guard Rails :— |  |
|-------------------------------|--|
| Forecastle Deck:              | 3 rails in stanchions 3'3" high + 3'3" apart. ✓                            |
| Fore Well "                   | Steel bulwarks. 4'3" high efficiently stayed. ✓                            |
| Bridge "                      | " " 3'3" high eff. stayed and 3 rails in stanchions 3'3" high + 4'3" apart |
| R.Q. "                        | " " 4' high efficiently stayed. ✓  |

Particulars of Gangways, Lifelines, etc.:- In Fore Well, 1 steel platform e/s of hatchways, permanently attached, with 2'8" high 9'6" apart.  
1 wire in stanchions On R.Q.D. same as above with 1 wire in stanchions 3' high & 7'6" apt.



| Particulars of Freeing Arrangements. |                   |                   |                          |                  |                  |                     |
|--------------------------------------|-------------------|-------------------|--------------------------|------------------|------------------|---------------------|
|                                      | Length of Bulwark | Height of Bulwark | Size of Freeing Ports    | Number each side | Area each side   | Rule area each side |
| Starboard Well R.Q.D. ....           | 75'               | 4'                | 2'9" x 1'5"<br>2-6 x 1-6 | 3                | 15.45<br>4-7 1/2 | 15 1/2              |
| Forward Well ... ..                  | 58.8'             | 4'3"              | 2'11" x 1'7"             | 4                | 18.5 1/2         | 12.38 1/2           |

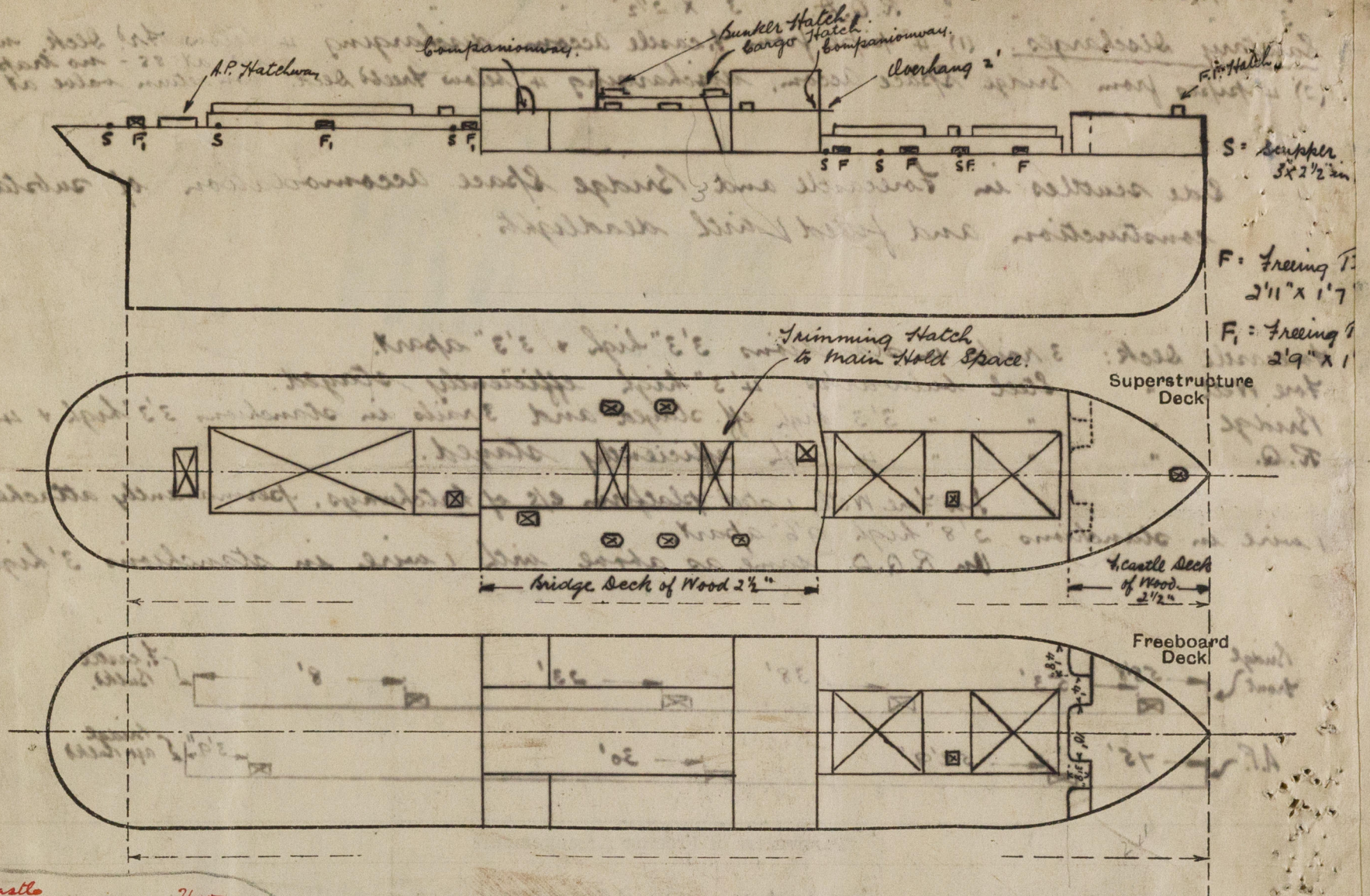
State and if position and neighbor above deck edge) ( After Well — 6" } See sketch above.  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — R.A.D.  
 Additional area where sheer is less than standard. Fore well  
 Swivel shutters + 1 Bar  
 (1) 2 Bars.  
 (2) Swivel shutters and 1 Bar.

| Particulars of Superstructures, Trunks, Casings, Deckhouses.                               |                     |           |                                  |         |                               |                   |                 |                   |
|--|---------------------|-----------|----------------------------------|---------|-------------------------------|-------------------|-----------------|-------------------|
|  | Coaming             | Plating   | Stiffeners                       | Spacing | End Attachments of Stiffeners | Size of Openings  | Height of Sills | Height of Casings |
| <del>Deep Bulkhead</del> ... ..  |                     |           |                                  |         |                               |                   |                 |                   |
| Raised Quarter Deck Bulkhead   | } .3"               | } .3"     | 5" x 3" x .35"<br>6" x 3" x .44" | 30"     |                               | none              | none            | 3' 7 1/2"         |
| Bridge, After Bulkhead ...   |                     |           |                                  | 30"     | none                          | none              | 7' 3"           |                   |
| Bridge, Forward Bulkhead ...   | .32"                | .32"      | not accessible                   |         | none                          | none              |                 | 7' 3"             |
| Forecastle Bulkhead ... ..   | .32                 | .26       | 3" x 2" x .3                     | 24"     | none                          | (6) 4' 6" x 1' 9" | 1' 9"           | 7' 3"             |
| Trunks, Aft ... ..   | Sides .4<br>End .45 | .4<br>.45 | boat sides                       | .       | .                             | ✓                 | ✓               | 3' 3"             |
| Trunk, Forward ... ..  | Sides .4<br>Ends .4 | .4<br>.4  | none                             | .       | .                             | ✓                 | ✓               | 3' 3"             |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...                         |                     |           |                                  |         |                               |                   |                 |                   |
| Exposed Machinery Casings on Superstructure Decks ... ..                                   | .3                  | .3        | 3" x 2 1/2" x .45                | 27"     | Brack @ top                   | (2) 4' 3" x 1' 9" | 1' 1"           | 7' 3"             |
| 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).         |  |
|--|--|
| Peep Bulkhead ... ..   | no openings -  |
| Raised Quarter Deck Bulkhead ... ..  |  |
| Bridge, After Bulkhead ... ..  | no openings -  |
| Bridge, Forward Bulkhead ... ..  |  |
| Forecastle Bulkhead ... ..   | (6) Steel hinged doors; fitted coach handles opening both sides. |
| Exposed Machinery Casings on Fore-<br>board or Raised Quarter Decks ...                            | (2) Steel hinged doors, fitted spring locks opening both sides.  |
| Exposed Machinery Casings on Super-<br>structure Decks ... ..                                      |  |
| Machinery Casings within Superstruc-<br>tures not fitted with Class I Closing<br>Appliances ... .. |  |
| Deckhouses on Flush Deck Ships ...   |  |



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:—



Fore Castle 24.00  
 Reass 4.00 x 3.67 = 14.68  
 13.67  
 24.93

State any special features in the construction of the ship:— The forward Hatchway on the Fiddley casing top is a cargo hatchway and leads to the main Hold Space.

This vessel examined in dry-dock for Freeboard and condition purposes  
 no special survey work carried out at this time.

Builder's name and yard number: Rykel + Co., Rotterdam.  
 Names of sister ships:  
 Owners: Shipping + Coal Co. Ltd., 27 Leadenhall Street, London, E.C.3.  
 Fee £ 8 : 10 : 0 Received by me  
 Expenses - 19 4