

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

14769

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having POOP, BRIDGE & FORECASTLE

(Type of Superstructures.)

Ship's Name UMLAZI Nationality and Port of Registry BRITISH LONDON Official Number 142724 Gross Tonnage 4276 Date of Build 1918-8m.

Moulded Dimensions: Length 379.87 Breadth 49.2 Depth 30.12  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12420 tons  
Coefficient of fineness for use with Tables .772

Port of Survey MIDDLESBROUGH  
Date of Survey 7<sup>th</sup> DEC. 1932  
Name of Surveyor J. A. Brighton  
Particulars of Classification +100 A1.  
SURVEY HELD AFLOAT.  
SS. No. 3-4-31

| Depth for Freeboard (D)   |       | Depth correction   |  | Round of Beam correction  |                             |
|---|-------|--|--|---|-----------------------------|
| Moulded depth   | 30.12 | (a) Where D is greater than Table depth<br>(D - Table depth) R =<br>(30.12 - 25.32) 2.92 |  | Moulded Breadth (B)   | 49.2                        |
| Stringer plate  | .04   | (b) Where D is less than Table depth (if allowed)<br>(Table depth - D) R =               |  | Standard Round of Beam = $\frac{B \times 12}{50}$                 | 11.8                        |
| Sheathing on exposed deck<br>$T \left( \frac{L-S}{L} \right) =$ |       |  |  | Ship's Round of Beam  | 12.2                        |
| Depth for Freeboard (D) =                                       | 30.16 | If restricted by superstructures   |  | Difference  |                             |
|   |       |  |  | Restricted to   |                             |
|   |       |  |  | Correction = $\frac{\text{Diff}^e}{4} \times (1 - \frac{S_1}{L})$ | $\frac{2}{4} (.5399) = .08$ |

## DEDUCTION FOR SUPERSTRUCTURES.

|                         | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height | Height Correction | Effective Length (E) |   |
|-------------------------|-------------------------|--|--------|-------------------|----------------------|---|
| Poop enclosed ...       | 29.5                    | 29.50  | 8.0    |                   | 29.50                | Standard Height of Superstructure <u>7.29</u>       |
| " overhang ...          | 7                       | .29  |        |                   | .29                  | " " R.Q.D. <u>✓</u>                                 |
| R.Q.D. enclosed ...     |                         |  |        |                   |                      | Deduction for complete superstructure <u>40.66</u>  |
| " overhang ...          |                         |  |        |                   |                      | Percentage covered $\frac{S}{L} = 46.35$            |
| Bridge enclosed ...     | 102.0                   | 102.00                                       | 8.0    |                   | 102.00               | " " $\frac{S_1}{L} = 46.01$                         |
| " overhang aft ...      | 36                      | 2.25   |        |                   | 2.25                 | " " $\frac{E}{L} = 46.01$                           |
| " overhang forward ...  | 35                      | .15  |        |                   | .15                  | Percentage from Table, Line A.                      |
| Fore enclosed ...       | 40.41                   | 40.41  | 8.0    |                   | 40.41                | (corrected for absence of forecastle (if required)) |
| " overhang ...          | 35                      | .15  |        |                   | .15                  | Percentage from Table, Line B. <u>32.61</u>         |
| Trunk aft ...           |                         |  |        |                   |                      | (corrected for absence of forecastle (if required)) |
| " forward ...           |                         |  |        |                   |                      | Interpolation for bridge less than 2L (if required) |
| Tonnage opening aft ... |                         |  |        |                   |                      | Deduction = <u>13.26</u>                            |
| " " forward             |                         |  |        |                   |                      |   |
| Total ...               | 176.07                  | 174.75                                       |        |                   | 174.75               |   |

## SHEER CORRECTION.

| Station                       | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |  |
|-------------------------------|-------------------|---|---|---------|-----------------|--------------------|---|---|---------|--|
| A.P. ...                      | 47.99             | 1 |   | 47.99   | 43.75           | 43.75              | 1 |   | 43.75   | Mean actual sheer aft = <u>Deficient</u>                 |
| $\frac{1}{4}$ L from A.P. ... | 21.35             | 4 |   | 85.40   | 21.23           | 21.23              | 4 |   | 84.92   | Mean actual sheer forward = <u>Deficient</u>             |
| $\frac{2}{4}$ L " ...         | 5.28              | 2 |   | 10.56   | 5.29            | 5.29               | 2 |   | 10.58   | Mean standard sheer forward                              |
| Amidships ...                 |                   | 4 |   | 0       |                 |                    | 4 |   |         | Length of enclosed superstructure forward of amidships = |
| $\frac{3}{4}$ L from F.P. ... | 10.56             | 2 |   | 21.12   | 9.53            | 9.53               | 2 |   | 19.06   | " " aft of " =   |
| $\frac{1}{4}$ L " ...         | 42.71             | 4 |   | 170.84  | 38.21           | 38.21              | 4 |   | 152.84  |  |
| F.P. ...                      | 95.98             | 1 |   | 95.98   | 89.75           | 89.75              | 1 |   | 89.75   |  |
| Total ...                     | 411.91            |   |   | 431.89  |                 |                    |   |   | 400.90  |  |

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{431.89 - 400.90}{18} \left( .75 - \frac{.75}{2} \right) = .89$

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.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 30.16 Ft.  
Summer freeboard = 5.96  
Moulded draught (d) = 24.20

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 6.05

Addition for Winter North Atlantic Freeboard (if required) =

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

Tons per inch immersion at summer load water line

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

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

Correction for coefficient

|  | +     | -     |
|--|-------|-------|
| Depth Correction                           | 14.14 |       |
| Deduction for superstructures              |       | 13.26 |
| Sheer correction                           | 8.9   |       |
| Round of Beam correction                   |       | .08   |
| Correction for Thickness of Deck amidships | -     | -     |
| Other corrections, scantlings, etc.        | -     | -     |
|  | 15.03 | 13.29 |

Summer Freeboard = 71.52

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

5-11 $\frac{1}{2}$

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 " " ...  
Winter North Atlantic " " ...



## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS  |                       |     |     |     |     |     |     |     |     |     |
|--|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Description of Hatchway  | ...                   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Dimensions of Hatchway   | ...                   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| COAMINGS   | Height above Deck     | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Thickness             | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Sides                 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Ends                  | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| HATCH BEAMS  | Number                | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Spacing               | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Scantling and Sketch  | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Bearing Surface       | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| FORE AND AFTERS  | Number                | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Spacing               | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Unsupported Lengths   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Scantling* and Sketch | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| HATCH COVERS   | Material              | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Thickness             | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | How fitted            | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|  | Bearing Surface       | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Spacing of Cleats  | ...                   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Number of Tarpaulins   | ...                   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <p>*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> YES</p> <p>Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> YES</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> YES</p> <p>Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/> YES</p> |                       |     |     |     |     |     |     |     |     |     |

Particulars of fiddley, funnel and ventilator coamings :—

STAKEHOLD GRATINGS COVERED BY STRONG STEEL HINGED COVERS.  
FIDLEY & FUNNEL YENTS. IN EFFICIENT CONDITION.  
ENGINE SKYLIGHT OF STEEL STRONGLY CONSTRUCTED

Particulars of Flush Bunker Scuttles:—

NONE FITTED.

Particulars of Companionways :—

NONE FITTED

ENTRANCE TO CREW SPACE AFT BY STAIRWAY IN STEEL DECK HOUSE  
WOOD DOORS IN STEEL DECK HOUSE I.P.S. 5'-3" x 2'-0" 12" SGL  
DOORS OPERATED FROM BOTH SIDES. ✓ ON POOP DECK.

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

ONE YENT ON FILE OK 9 DIA. CORR<sup>3</sup>. 3 TO LOWER PEAK.  
 " " " " " " 9 " x .3 TO FILE SPACE  
 12 YENTS " FREE? DR. IN FIELD 19 1/2 DIA. x .4 x 3'0" CORR<sup>3</sup> TO WILDS  
 " " " " " " 19 1/2 " x .5 x 9'0" " STAYED TO BRIDGE BLK?  
 " " " " " " 19 1/2 " x .5 x 15'0" " " " "  
 ALL YENTS. CONSTRUCTED IN ACCORDANCE WITH RULES  
 AND CORR<sup>3</sup> CLOSED WITH XOOD PLUGS + CANVAS COVERS.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

4 G.I. AIR PIPES IN FOR<sup>O</sup> WELL 3'9" HIGH x 3" DIA. FROM D.B. TANKS.  
6 " " " AFTER WELL 3'6" HIGH x 3"  
1 " " ON FLOODE. 1'-1" HIGH x 3" DIA. FROM FORE PEAK TANK  
ALL AIR PIPES CLOSED WITH WOOD PLUGS + CANYAS COVERS.  
SOUNDING PIPES FLUSH WITH DECK + FITTED WITH BRASS SCREW

Particulars of Gangway Cargo and Coaling Ports:—

NONE FITTED.

Particulars of Scuppers and Sanitary Discharge Pipes :—

Particulars of Scuppers and Sanitary Discharge Pipes :-

SCUPPERS BELOW FREEBOARD DECK, FITTED WITH GUNMETAL STORM VALVES AT SHIPS SIDE & GRATING AT DECK.

SANITARY DISCHARGE PIPES FITTED WITH GUNMETAL STORM VALVES AT SHIPS SIDE AND EFFICIENT TRAPS ON INNER END

Particulars of Side Scuttles :—

ALL SIDE SCUTTLES TO CREW SPACES IN POOP & FORECASTLE  
PROVIDED WITH PORTABLE DEADLIGHTS. NO SCUTTLES IN BRIDGE TWEEN DECKS.  
ALL SCUTTLES OF SUBSTANTIAL CONSTRUCTION.

Particulars of Guard Rails :—

STEEL BULWARKS ON FREEBOARD DECK IN WELLS 4'-6" HIGH  
EFFICIENTLY CONSTRUCTED & SUPPORTED.  
GUARD RAILS ON POOP, BRIDGE & FLE 3'-3" HIGH WITH 3 RODS  
& STANCHIONS SPACED 4'-0" APART.

Particulars of Gangways, Lifelines, etc. :—

EFFICIENT LIFE LINES PROVIDED 14 FORE & AFTER WELLS  
PORT & STAR<sup>BD</sup> SIDES.

| 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 ... ..                    | <sup>116.5</sup><br><del>120.0</del> | 4'-6"             | 2'-10" x 1'-9"        | 6                | 29.71<br>sq.ft. | <sup>28.2</sup><br><del>24</del> sq.ft. |
| Forward Well ... ..                  | <sup>38</sup><br><del>90.0</del>     | 4'-6"             | 2'-10" x 1'-9"        | 4                | 19.8<br>sq.ft.  | <sup>17.6</sup><br><del>18</del> sq.ft. |

State position of each freeing port ... .. After Well:— 10½" ABOVE DK. TO BOTTOM OF FREEING PORTS  
 (and A. position and height above deck edge) } Forward Well:— SEE SKETCH FOR F.P. POSITION  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 3 RODS FITTED TO EACH PORT.

Additional area where sheer is less than standard.

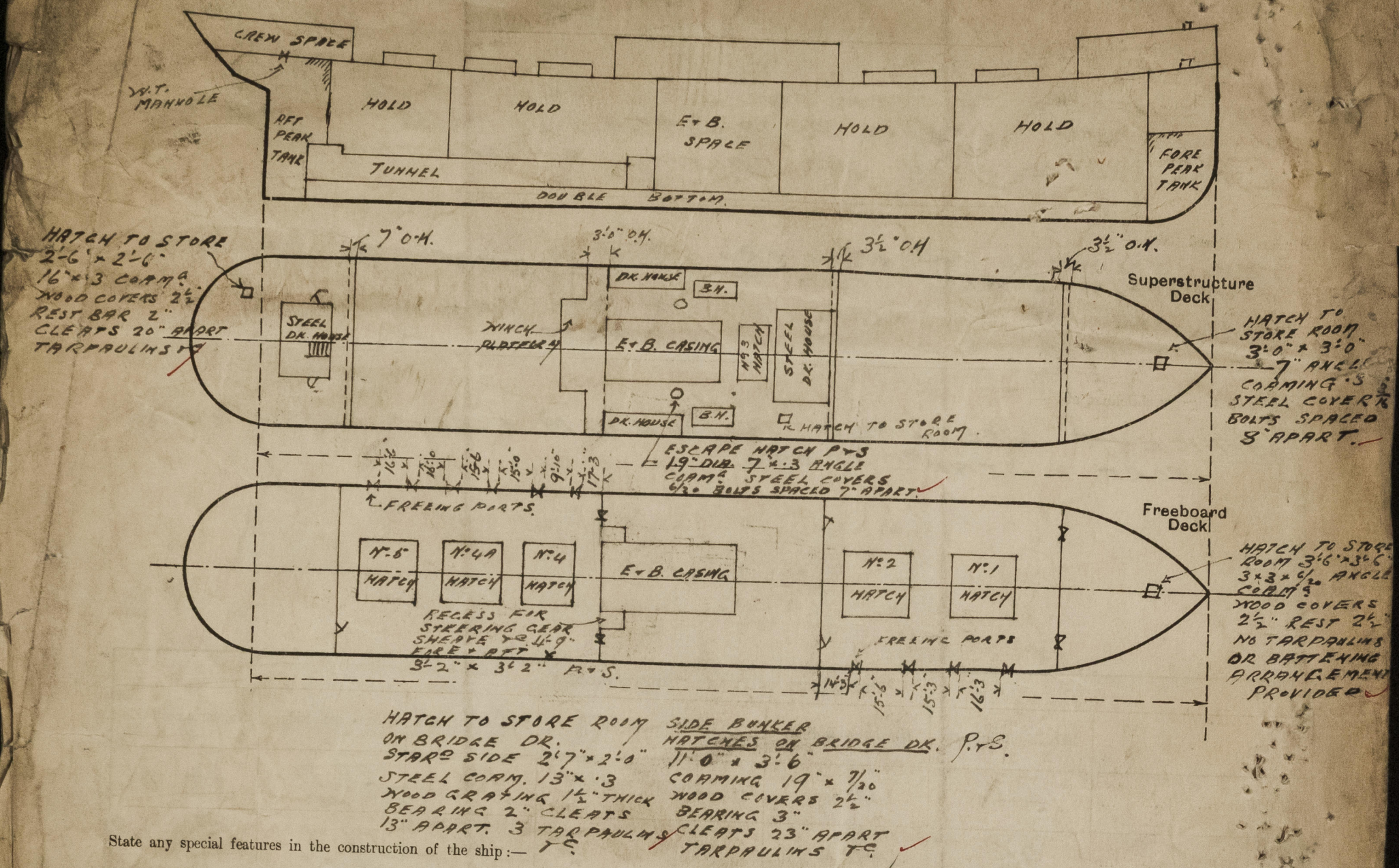
| Particulars of Superstructures, Trunks, Casings, Deckhouses, Deckhouses.                   |                       |                |                             |         |                               |                  |                 |                   |
|--|-----------------------|----------------|-----------------------------|---------|-------------------------------|------------------|-----------------|-------------------|
|  | Coaming               | Plating        | Stiffeners                  | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
| Poop Bulkhead ... ..   | 42" x $\frac{7}{20}$  | $\frac{6}{20}$ | NOT OBTAINABLE              |         |                               | 5'-0" x 2'-0"    | 1'-10"          | 8'-0"             |
| Raised Quarter Deck Bulkhead ...   | ✓                     |                |                             |         |                               |                  |                 |                   |
| Bridge, After Bulkhead ... ..  | 45" x $\frac{9}{20}$  | $\frac{7}{20}$ | 4 x 3½" x $\frac{7}{20}$ L  | 2'-7"   | NONE                          | 4'-9" x 3'-3"    | 1'-9½"          | 8'-0"             |
| Bridge, Forward Bulkhead ... ..  | 45" x $\frac{10}{20}$ | $\frac{8}{20}$ | 8 x 3½" x $\frac{10}{20}$ L | 2'-6"   | BRACKETS TOP & BOTTOM         | 5'-0" x 3'-6"    | 1'-4"           | 8'-0"             |
| Forecastle Bulkhead ... ..   | 42" x $\frac{7}{20}$  | $\frac{6}{20}$ | 4 x 3" x $\frac{7}{20}$ L   | 2'-6"   | NONE                          | 4'-9" x 3'-3"    | 1'-10"          | 8'-0"             |
| Trunk, Aft ... ..  | ✓                     |                |                             |         |                               |                  |                 |                   |
| Trunk, Forward ... ..  | ✓                     |                |                             |         |                               |                  |                 |                   |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks ...                        | ✓                     |                |                             |         |                               |                  |                 |                   |
| Exposed Machinery Casings on Super-structure Decks ... ..                                  | 18" x $\frac{8}{20}$  | $\frac{6}{20}$ | 3½ x 3" x $\frac{7}{20}$    | 3'-0"   | BRACKETS AT CASING TOP        | 5'-0" x 2'-0"    | 1'-6"           | 7'-3"             |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... .. | 18" x $\frac{8}{20}$  | $\frac{6}{20}$ | 3½ x 3" x $\frac{7}{20}$    | 3'-0"   | D:                            | 5'-0" x 2'-0"    | 1'-6"           | -                 |
| Deckhouses on Flush Deck Ships ...   | ✓                     |                |                             |         |                               |                  |                 |                   |

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

|  |   |
|--|---|
| Poop Bulkhead ... ..   | ONE STEEL HINGED DOOR STAR <sup>o</sup> SIDE MANIPULATED FROM BOTH SIDES.             |
| Raised Quarter Deck Bulkhead ...   | ✓   |
| Bridge, After Bulkhead ... ..  | STORM BOARDS IN RIV <sup>o</sup> CHANNELS 2½" THICK FULL HEIGHT P+S.                  |
| Bridge, Forward Bulkhead ... ..  | 2 HINGED W.T. BOLTED STEEL DOORS I.P.I.S OPERATED FROM OUTSIDE ONLY.                  |
| Forecastle Bulkhead ... ..   | STORM BOARDS IN RIV <sup>o</sup> CHANNELS 2½" THICK FULL HEIGHT P+S.                  |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...                         | ✓   |
| Exposed Machinery Casings on Superstructure Decks ... ..                                   | HINGED STEEL DOORS TO ENGINE ROOM & STOKENHOLD 2.P.2.S. OPERATED FROM BOTH SIDES.     |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... .. | HINGED STEEL DOORS TO BUNKERS FROM STOKENHOLD I.P.I.S. OPERATED FROM STOKENHOLD ONLY. |
| 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:—



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

Note Survey held afloat and confined to obtaining the above particulars.

Vessel was cooling and complete particulars in bridge tween all. space could not be obtained.

The vessel was in dry dock at this Port - on 6<sup>th</sup> inst  
See Middleborough Report No. 14767

Builder's name and yard number. CANADIAN YICKERS L<sup>o</sup> N<sup>o</sup> 19

Names of sister ships.

Owners MESS<sup>RS</sup> BULLARD KING & CO L<sup>DS</sup>

Fee £ 12 : 15 :

Received by me