

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 53809

Computation of Freeboard for **MOTORSHIP** ~~Steamship~~ ~~Clippership~~ ~~Tug~~  
having a raised quarter deck, bridge and forecastle

Port of Survey **BOWLING.**

Date of Survey **1<sup>st</sup> Sept. 1933**

Name of Surveyor **H. Thomson**

Particulars of Classification **+ 100A.1.**  
(*contemplated*)

Ship's Name **"BREEZE"**

Nationality and Port of Registry **BRITISH (New Zealand)**  
**LYTTLETON**  
**MANILA**

Official Number **132427**

Gross Tonnage **622**

Date of Build **1933**

Moulded Dimensions: Length **174.5** Breadth **30.0** Depth **12.5**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **1116** tons

Coefficient of fineness for use with Tables **.702**

| Depth for Freeboard (D)   |             | Depth correction  |   | Round of Beam correction   |                                    |
|---|-------------|---|---|--|------------------------------------|
| Moulded depth   | 12.50       | (a) Where D is greater than Table depth<br>(D - Table depth) R =<br>(12.53 - 11.63) 1.342 | ✓ | Moulded Breadth (B)  | 30.0                               |
| Stringer plate  | .35         | (b) Where D is less than Table depth (if allowed)<br>(Table depth - D) R =                | ✓ | Standard Round of Beam = $\frac{B \times 12}{50}$                            | 7.20                               |
| Sheathing on exposed deck<br>$T \left( \frac{L-S}{L} \right) =$ | <i>none</i> |   |   | Ship's Round of Beam   | 9.0                                |
|   |             |   |   | Difference   | 1.80                               |
| Depth for Freeboard (D) =                                       | 12.53       | If restricted by superstructures  |   | Restricted to  |                                    |
|   |             |   |   | Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$ | $\frac{1.80}{4} (1 - .8003) = .09$ |

## DEDUCTION FOR SUPERSTRUCTURES.

|                     | Mean Covered Length (S) | Equivalent Enclosed Length (S <sub>1</sub> ) | Height | Height Correction | Effective Length (E) |   |
|---------------------|-------------------------|--|--------|-------------------|----------------------|---|
| Deck enclosed       |                         |  |        |                   |                      | Standard Height of Superstructure <b>6.0</b>        |
| " overhang          |                         |  |        |                   |                      | " " R.Q.D. <b>3.496</b>                             |
| R.Q.D. enclosed     | 99.0                    | 99.0   | 3.9    | ✓                 | 99.0                 | Deduction for complete superstructure <b>23.45</b>  |
| " overhang          | <i>none</i>             |  |        |                   |                      | Percentage covered $\frac{S}{L} = .80.03$           |
| Bridge enclosed     | 11.0                    | 11.0   | 7.0    | ✓                 | 11.0                 | " " $\frac{S_1}{L} = .80.03$                        |
| " overhang aft      | <i>none</i>             |  |        |                   |                      | " " $\frac{E}{L} = .80.03$                          |
| " overhang forward  | <i>none</i>             |  |        |                   |                      | Percentage from Table, Line A. <b>75.34</b>         |
| Fore enclosed       | 29.66                   | 29.66  | 7.0    | ✓                 | 29.66                | (corrected for absence of forecastle (if required)) |
| " overhang          | <i>none</i>             |  |        |                   |                      | 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 = <b>23.45 x 75.34 = 17.67</b>            |
| " forward           |                         |  |        |                   |                      |   |
| Total               | 139.66                  | 139.66                                       |        |                   | 139.66               |   |

## SHEER CORRECTION.

| Station         | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |  |
|-----------------|-------------------|---|---|---------|-----------------|--------------------|---|---|---------|--|
| A.P.            | 27.45             | 1 |   | 27.45   | 30.0            | 33.05              | 1 |   | 33.05   | Mean actual sheer aft = <i>same</i>                                      |
| 1/4 L from A.P. | 12.21             | 4 |   | 48.84   | 14.0            | 14.68              | 4 |   | 58.72   | Mean actual sheer forward = <i>same</i>                                  |
| 1/2 L           | 3.02              | 2 |   | 6.04    | 3.0             | 3.63               | 2 |   | 7.26    | Mean standard sheer forward = <i>same</i>                                |
| Amidships       | -                 | 4 |   | -       | -               | -                  | 4 |   | -       | Length of enclosed superstructure forward of amidships = <b>&gt; .1L</b> |
| 3/4 L from F.P. | 6.04              | 2 |   | 12.08   | 6.0             | 6.0                | 2 |   | 12.00   | " " aft of " = <b>&gt; .1L</b>   |
| 1/4 L           | 24.42             | 4 |   | 97.68   | 27.0            | 27.0               | 4 |   | 108.00  |  |
| F.P.            | 54.90             | 1 |   | 54.90   | 60.0            | 60.0               | 1 |   | 60.00   |  |
| Total           | 128.04            |   |   | 246.89  |                 | 144.51             |   |   | 278.98  |  |

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{32.09}{18} (.75 - .4001) = .624$

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.

R.Q. Ft.

Depth to Freeboard Deck = **16.28**

Summer freeboard = **3.92**

Moulded draught (d) = **12.36**

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches =  $\frac{12.36}{4} = 3.09$

Addition for Winter North Atlantic Freeboard (if required) = **3 + 2 = 5**

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 1340$ 

Tons per inch immersion at summer load water line

 $T = 10.53$ Deduction =  $\frac{\Delta}{40T}$  inches $= \frac{1340}{40 \times 10.53}$  $= 3.14$ 

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

Correction for coefficient  $\frac{.702 + .68}{1.36} = \frac{1.382}{1.36} = 1.016$ 

+ -

Depth Correction ... **1.21**Deduction for superstructures ... **17.67**Sheer correction ... **.62**Round of Beam correction ... **.09**Correction for Thickness of Deck amidships ... **45.00**Other corrections, scantlings, etc. ... **9**Summer Freeboard = **46.83**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:—

|  |       |                                |                  |
|--|-------|--------------------------------|------------------|
| Tropical Fresh Water Line above Centre of Disc | 3 1/4 | Tropical Fresh Water Freeboard | 3'-11"           |
| Fresh Water Line                               | 3 1/4 | Fresh Water                    | 3'-8 7/8"        |
| Tropical Line                                  | 3 1/4 | Tropical                       | 3'-8 7/8"        |
| Winter Line below                              | 3     | Winter                         | 3'-11" (LIMITED) |
| Winter North Atlantic Line                     | 5     | Winter North Atlantic          | 4'-2"            |
|  |       |                                | 4'-4"            |



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS |                       |               |               |  |  |  |  |  |  |
|---|-----------------------|---------------|---------------|--|--|--|--|--|--|
| Description of Hatchway                         |                       | Fore Well     | R.Q.D.        |  |  |  |  |  |  |
| Dimensions of Hatchway                          |                       | 29'4" x 18'6" | 33'0" x 18'6" |  |  |  |  |  |  |
| COAMINGS  | Height above Deck     | 39            | 32            |  |  |  |  |  |  |
|   | Thickness             | 42            | 42            |  |  |  |  |  |  |
|   | Stiffeners            | 7 x 3 x 40    | 7 x 3 x 40    |  |  |  |  |  |  |
|   | Brackets              | 2             | 3             |  |  |  |  |  |  |
|   | Number                | 5             | 6             |  |  |  |  |  |  |
| HATCH BEAMS                                     | Spacing               | 4'-11 1/2"    | 4'-11 1/2"    |  |  |  |  |  |  |
|   | Scantling and Sketch  | 15 x 34       | 12 x 32       |  |  |  |  |  |  |
|   |                       | 4 x 3 x 44    | 4 x 3 x 44    |  |  |  |  |  |  |
|   | Bearing Surface       | 3             | 3             |  |  |  |  |  |  |
|   | Number                |               |               |  |  |  |  |  |  |
| FORE AND AFTERS                                 | Spacing               |               |               |  |  |  |  |  |  |
|   | Unsupported Lengths   |               |               |  |  |  |  |  |  |
|   | Scantling* and Sketch |               |               |  |  |  |  |  |  |
|   | Bearing Surface       |               |               |  |  |  |  |  |  |
|   | Number                |               |               |  |  |  |  |  |  |
| HATCH COVERS                                    | Material              | W.P.          | W.P.          |  |  |  |  |  |  |
|   | Thickness             | 2 1/2         | 2 1/2         |  |  |  |  |  |  |
|   | How fitted            | F + A         | F + A         |  |  |  |  |  |  |
|   | Bearing Surface       | 3             | 3             |  |  |  |  |  |  |
|   | Number                |               |               |  |  |  |  |  |  |
| Spacing of Cleats                               |                       | 21            | 21            |  |  |  |  |  |  |
| Number of Tarpaulins                            |                       | 2             | 2             |  |  |  |  |  |  |

\*Are wood fore and afters steel shod at all bearing surfaces? *yes*  
 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? *Roughbolts for lashings provided.*

## Particulars of fiddle, funnel and ventilator coamings:—

*Engine skylight on casing top of steel and strongly constructed.*  
*Fiddle openings on casing top fitted with hinged plate covers.*

## Particulars of Flush Bunker Scuttles:—

*none*

## Particulars of Companionways:—

*none*

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

*1 ventilator on forewell deck to crew space. casing 36 x 7 x 30*  
*1 - in well to hold. 36 x 10 x 32*  
*1 - on R.Q.D. to hold. 36 x 12 x 32*  
*Ventilator casings closed with wood plugs and canvas covers.*

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

*1 air pipe in fore well to F.P. tank 36" x 4"*  
*1 - - - - - D.B. - 36" x 6"*  
*2 - - - - - R.Q. deck - 30" x 4"*  
*2 - - - - - O.F. - 30 x 3 1/2*  
*1 - - - - - A.P. - 30 x 4*  
*1 - - - - - A.P. - 30 x 3 1/2*  
*air pipes closed with wood plugs. no coupling holes fitted.*

## Particulars of Gangway Cargo and Coaling Ports:—

*none*

*Breeze.*

## Particulars of Scuppers and Sanitary Discharge Pipes:—

*There are no scupper pipes discharging below the freeboard deck.*  
*1 sanitary pipe only discharges below the freeboard deck in position shown in sketch and has a storm valve fitted at ship's side.*

## Particulars of Side Scuttles:—

*There are no side lights fitted below the freeboard deck or in bridge space.*  
*Side lights in forewell 8" dia. fitted with hinged iron deadlights.*

## Particulars of Guard Rails:—

*Guard rails on forewell deck 3'-9" high with 2 rails. stanchions 4'-5" apart.*

## Particulars of Gangways, Lifelines, etc.:—

*a gangway is fitted along side of hatchway in forward well with platforms to ladders.*

## 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   | 99'-0"            | 3'-6"             | 36" x 18<br>27 x 18   | 3<br>2           | 20.3           | 19.807<br>20.0      |
| Forward Well | 34'-10"           | 3'-9"             | 30 x 18<br>27 x 18    | 1<br>2           | 10.5           | 10.0                |

State position of each freeing port ... After Well:— 7 mi bridge after hull 12'-6", 28'-10", 44'-9", 62'-0" ~ 79'-0" 4 x 4' above deck 1 x 12' above deck  
 (F. and A. position and height above deck edge) Forward Well:— 8' 1'-2", 13'-6", 24'-3 1/2" 9' above deck  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— *fitted with 2 rails.*  
 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       |
|---|-------------|---------|--------------------|---------|-------------------------------|------------------|-----------------|-------------------------|
| <del>Prop. Bulkhead</del>   |             |         |                    |         |                               |                  |                 |                         |
| Raised Quarter Deck Bulkhead  | <i>none</i> | .30     | 34 x 2 1/2 x 28    | 30      | <i>none</i>                   | <i>none</i>      | ✓               | ✓                       |
| Bridge, After Bulkhead  |             |         |                    |         |                               |                  |                 |                         |
| Bridge, Forward Bulkhead  | .30         | .30     | 4 1/2 x 3 x 34 1/2 | 30      | large T + B                   | <i>none</i>      | ✓               | ✓                       |
| Forecastle Bulkhead   | <i>none</i> | .28     | 2 1/2 x 2 1/2 x 26 | 30      | <i>none</i>                   | 4'-6" x 1'-9"    | 18"             | ✓                       |
| <del>Trunk, Aft</del>   |             |         |                    |         |                               |                  |                 |                         |
| <del>Trunk, Forward</del>   |             |         |                    |         |                               |                  |                 |                         |
| Exposed Machinery Casings on Deck   | 18 x .30    | .26     | 3 x 2 1/2 x 28     | 30      | brackets at top               | 4'-5" x 1'-10"   | 18"             | 6'-0" side 7'-0" center |
| Exposed Machinery Casings on Superstructure Decks                                   |             |         |                    |         |                               |                  |                 |                         |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances |             |         |                    |         |                               |                  |                 |                         |
| Deckhouses on Flush Deck Ships  |             |         |                    |         |                               |                  |                 |                         |

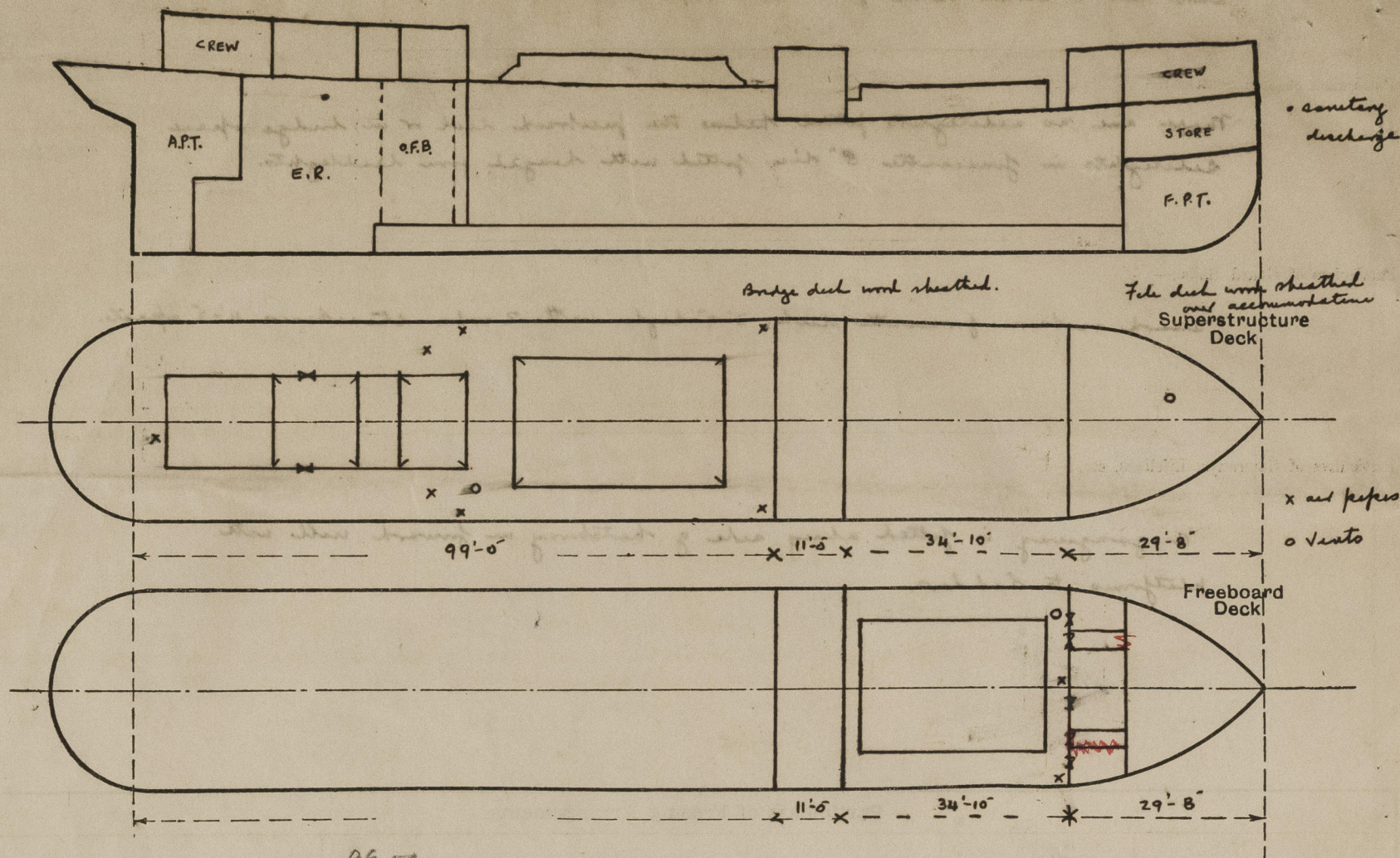
## Particulars of Closing Appliances (state if capable of being manipulated from both sides).

|   |  |             |
|---|--|-------------|
| <del>Prop. Bulkhead</del>   |  |             |
| Raised Quarter Deck Bulkhead  | <i>No openings</i>                                     | <i>none</i> |
| Bridge, After Bulkhead  |  |             |
| Bridge, Forward Bulkhead  | <i>No openings</i>                                     | <i>none</i> |
| Forecastle Bulkhead   | <i>Hinged tank doors manipulated from both sides.</i>  |             |
| Exposed Machinery Casings on Deck   | <i>Hinged steel doors manipulated from both sides.</i> |             |
| Exposed Machinery Casings on Superstructure Decks                                   |  |             |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances |  |             |
| Deckhouses on Flush Deck Ships  |  |             |



Breeze

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:—



99.00  
11.00  
34.83  
29.67  
174.50

State any special features in the construction of the ship:— This vessel is intended for the New Zealand coasting trade

Timber fastened not required. ✓

Plans of midships section, Profile & decks (2 plans) are forwarded herewith for reference. ✓

Builder's name and yard number Scott & Sons No 324

Names of sister ships none. see preliminary ass. 2nd May 1933.

Owners Canterbury Steam Shipping Co Ltd.

Fee £ will be charged later Received by me



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