

30 AUG 1932

Rpt. C.11.

Index. No. **31269**
(For London Office only.)Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 52854

having *Raised Quarter Deck, Bridge and Forecastle.*

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Port of Survey *Glasgow.*Date of Survey *29th August 1932.*Name of Surveyor *James R Clark*Particulars of Classification *100A1*
S.S. Burg. No 1-29

(Type of Superstructures.)

Ship's Name

GEM.

Nationality and Port of Registry

British Glasgow.

Official Number

117915

Gross Tonnage

640

Date of Build

*1924*Moulded Dimensions: Length *174.75* Breadth *27.5* Depth *13.33*

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

Coefficient of fineness for use with Tables *0.42*

Depth for Freeboard (D)

Moulded depth ... *13.33*Stringer plate *R.Q. 8" 36"* ... *03*

Sheathing on exposed deck

$$T \left(\frac{L-S}{L} \right) =$$

Depth for Freeboard (D) = *13.36*

Depth correction

(a) Where D is greater than Table depth

(D-Table depth) R =

$$(13.36 - 11.65) 1.744 = +2.30$$

(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) *27' 6"*

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 6.60$$

Ship's Round of Beam = *8' 2"*Difference *1.9*

Restricted to

$$\text{Correction} = \frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.9^2}{4} \times 0.2247 = -0.11$$

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|------------|-------------------|----------------------|
| Poop enclosed ... | | | | | |
| " overhang ... | | | | | |
| R.Q.D. enclosed ... | <i>101.31</i> | <i>101.31</i> | <i>4.0</i> | | <i>101.31</i> |
| " overhang ... | | | | | |
| Bridge enclosed ... | <i>11.00</i> | <i>11.00</i> | <i>7.0</i> | | <i>11.00</i> |
| " overhang aft ... | | | | | |
| " overhang forward ... | | | | | |
| F'cle enclosed ... | <i>20.59</i> | <i>20.59</i> | <i>7.0</i> | | <i>20.59</i> |
| " overhang ... | | | | | |
| Trunk aft ... | | | | | |
| " forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| " forward ... | | | | | |
| Total ... | <i>138.08</i> | <i>135.49</i> | | | <i>135.49</i> |

Standard Height of Superstructure *6.0*" " R.Q.D. *3.498*Deduction for complete superstructure *23.47*

$$\text{Percentage covered } \frac{S}{L} = 79.02$$

$$\text{" " } \frac{S_1}{L} = 77.53$$

$$\text{" " } \frac{E}{L} = 77.53$$

Percentage from Table, Line A.

(corrected for absence of forecastle (if required)) *72.26*

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

$$\text{Deduction} = 23.47 \times 72.26 = -16.96$$

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|-------------------------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|---------------|
| A.P. ... | <i>27.475</i> | 1 | | <i>27.47</i> | <i>30"</i> | <i>30.00</i> | 1 | | <i>30.00</i> |
| $\frac{1}{2}$ L from A.P. ... | <i>12.23</i> | 4 | | <i>48.92</i> | <i>13"</i> | <i>13.43</i> | 4 | | <i>53.72</i> |
| $\frac{3}{8}$ L " ... | <i>3.02</i> | 2 | | <i>6.04</i> | <i>3"</i> | <i>3.35</i> | 2 | | <i>6.70</i> |
| Amidships ... | | 4 | | | | | 4 | | |
| $\frac{3}{8}$ L from F.P. ... | <i>6.04</i> | 2 | | <i>12.08</i> | <i>6"</i> | <i>6.35</i> | 2 | | <i>12.70</i> |
| $\frac{1}{2}$ L " ... | <i>24.45</i> | 4 | | <i>97.80</i> | <i>25"</i> | <i>25.48</i> | 4 | | <i>101.92</i> |
| F.P. ... | <i>54.95</i> | 1 | | <i>54.95</i> | <i>60"</i> | <i>60.00</i> | 1 | | <i>60.00</i> |
| Total ... | | | | <i>247.26</i> | | | | | <i>282.68</i> |

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{35.42}{18} \left(\frac{75-39.51}{2} \right) = -0.40$$

If limited on account of midship superstructure.

If limited to maximum allowance of $\frac{1}{2}$ ins. per 100 ft.Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.Depth to Freeboard Deck = *14.36* Ft.Summer freeboard = *4.33*Moulded draught (d) = *13.03*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *3.26* - *3.4*

Addition for Winter North Atlantic Freeboard (if required) =

$$3.26 + 2 = 5.4$$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ *1324*

Tons per inch immersion at summer load water line

T = *9.45*Deduction = $\frac{\Delta}{40T}$ inches= *3.40*= *3.2*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{72+68}{136} = \frac{1.40}{1.36}$ Depth Correction ... *2.3*Deduction for superstructures ... *16.96*Sheer correction ... *4.0*Round of Beam correction ... *1.1*Correction for Thickness of Deck amidships ... *48.0*

Other corrections, scantlings, etc. ...

50.30 *14.44* + *32.53*Summer Freeboard = *52.10*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *Wood*, Steel, Deck:—

| | |
|--|------------|
| Tropical Fresh Water Line above Centre of Disc ... | <i>6.2</i> |
| Fresh Water Line " " ... | <i>3.2</i> |
| Tropical Line " " ... | <i>2.0</i> |
| Winter Line below " " ... | <i>3.4</i> |
| Winter North Atlantic Line " " ... | <i>5.4</i> |

| | |
|------------------------------------|-----------------|
| Tropical Fresh Water Freeboard ... | <i>3' 10.2"</i> |
| Fresh Water " " ... | <i>4' 0.2"</i> |
| Tropical " " ... | <i>4' 2.2"</i> |
| Winter " " ... | <i>4' 7.4"</i> |
| Winter North Atlantic " " ... | <i>4' 9.4"</i> |

31 AUG 1932

MARKING FORM
- 3 OCT 1938MARKING FORM
27 JUL 1934MARKING FORM
6 - SEP 1932

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | |
|---|-----------------------|----------------|----------------|--|--|--|--|--|--|
| Description of Hatchway | | Nº 1 FBD OK | Nº 2 RQ OK | | | | | | |
| Dimensions of Hatchway | | 33' x 16' | 33' x 17' | | | | | | |
| COAMINGS | Height above Deck | 36" | 36" | | | | | | |
| | Thickness | 42" | 42" | | | | | | |
| | Stiffeners | 1" B.D. | 1" B.D. | | | | | | |
| | Brackets, Stays | 3 PLATE STAYS | 3 PLATE STAYS. | | | | | | |
| HATCH BEAMS | Number | 5 | 5 | | | | | | |
| | Spacing | 5.5 | 5.5 | | | | | | |
| | Scantling and Sketch | 13" x 34" | 14" x 34" | | | | | | |
| | Bearing Surface | 3" | 3" | | | | | | |
| FORE AND AFTERS | Number | | | | | | | | |
| | Spacing | | | | | | | | |
| | Unsupported Lengths | | | | | | | | |
| | Scantling* and Sketch | NONE | | | | | | | |
| HATCH COVERS | Material | W.P. | W.P. | | | | | | |
| | Thickness | 2 3/8" | 2 3/8" | | | | | | |
| | How fitted | F+ A | F+ A | | | | | | |
| | Bearing Surface | 3" | 3" | | | | | | |
| Spacing of Cleats | | 24" | 24" | | | | | | |
| Number of Tarpaulins | | 2 | 2 | | | | | | |
| <p>*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes</i></p> <p>Are battens and wedges efficient and in good condition? <i>Yes</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>Kingbolts fitted</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Yes</i></p> | | | | | | | | | |

Particulars of fiddley, funnel and ventilator coamings:— *Stokehold gratings covered by strong steel linged covers - fiddley, funnel and ventilator in efficient condition. - ER skylight of steel strongly constructed. - Coal Hatch 7'3" x 11'0". 9" coaming, 2 3/8" covers and F+ A, 2" bearing, cleats spaced 24", 2 Tarpaulins.*

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

Formed by deckhouse on bridge, leading to Br. space, door 4'6" x 22" of 1 3/8" Hardwood. 15" sill. Door manipulated both sides.

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

| Loc. | No. | Dia. | Coaming | to |
|----------|-----|------|---------|-------------|
| F.C.L.E. | 1 | 6" | 34 x 32 | to crew sp. |
| | 1 | 10" | 34 x 36 | to Hold. |
| Hd. S. | 1 | 6" | 34 x 34 | to Stool. |
| Br. | 2 | 6" | 20 x 30 | to Officer. |
| R.Q. | 1 | 10" | 36 x 34 | to Hold. |

2 Stove Inls. on Tole. S. from crew space.

No covers and plugs.

Efficient closing arrangements provided.

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

| Loc. | No. | Dia. | to |
|---------|-----|--------|---------|
| Tole. | 1 | 4" | to F.P. |
| Hd. S. | 1 | 5" | to D.B. |
| R.Q. S. | 2 | 4" | to D.B. |
| " | 1 | 2 1/2" | to A.P. |

No snifting holes

No covers. Efficient closing arrangements provided

Particulars of Gangway Cargo and Coaling Ports:—

None.



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Particulars of Scuppers and Sanitary Discharge Pipes :-

W.C. dis. aft fitted with storm valve.
No other discharges from below Tbd. or erections.

Particulars of Side Scuttles :-

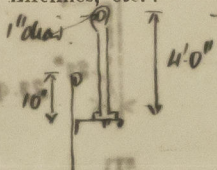
Side scuttles of substantial construction in Tbd. and Bt. sides. No deadlight.

Particulars of Guard Rails :-

On Tbd. 36" high, 2 rods, stanchions spaced 4'6".
Steel bulwarks on Tbd., Bt. and R.Q. D. efficiently constructed and supported.

Particulars of Gangways, Lifelines, etc. :-

Stanchions provided for fitting to B.A. stiff. on Tbd. & Star.
Stanchions spaced 8'0".



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 | 101.31 | 40" | 36" x 15" 36" x 15" | 2 * 3 | 75 sq ft 21 sq ft | 20.26 sq ft |
| Forward Well | 36.67 | 50" | 30" x 18" | 3 | 11.25 sq ft | 10.17 sq ft |
| State position of each freeing port (F. and A. position and height above deck edge) } After Well :- 5'6" AFT END TO FORD SIDE PORT 7'6" 19'6" 28'6" 45'0" 4'2" above dk. Forward Well :- 1'9" 10'6" 18'6" 10'2" " " | | | | | | |
| State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- Hinged shutters. * These fitted with one bar. | | | | | | |
| Additional area where sheer is less than standard. | | | | | | |

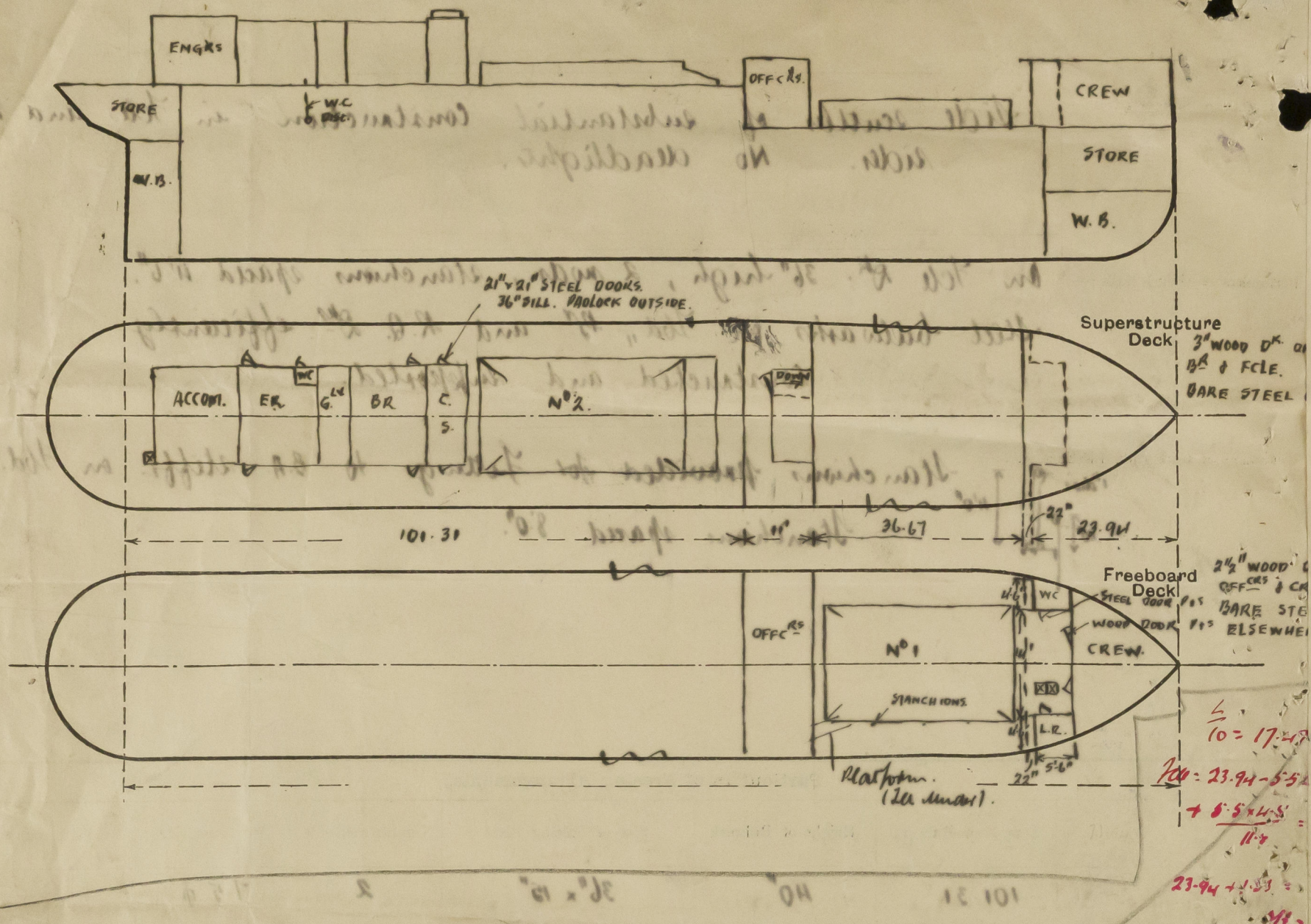
Particulars of Superstructures, Trunks, Casings, Deckhouses.

| | Coaming | Plating | Stiffeners | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
|---|---------|---------|----------------|---------|-------------------------------|------------------|-----------------|-------------------|
| Poop Bulkhead | ✓ | | | | | | | |
| Raised Quarter Deck Bulkhead | ✓ | 30 | 6.3 x 3.4 B | 30" | ing at top 4'6" x 22" | none | - | - |
| Bridge, After Bulkhead | ✓ | 30 | 6.3 x 3.4 B | 30" | do | none | - | - |
| Bridge, Forward Bulkhead | ✓ | | | | | | | |
| Forecastle Bulkhead | 26 | 26 | 3 x 2 1/2 x 30 | 36" | ing at top 4'6" x 22" | 4'6" x 22" | 18" | 7' |
| Trunk, Aft | | | | | | | | |
| Trunk, Forward | | | | | | | | |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks | 32 | 28 | 4 x 2 1/2 x 28 | 30" | ing at top 4'6" x 22" | 4'6" x 22" | 18" | 6'6" |
| Exposed Machinery Casings on Super-structure 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 | ✓ No openings |
| Bridge, After Bulkhead | ✓ Efficient Portholes No openings |
| Bridge, Forward Bulkhead | ✓ " " No openings |
| Forecastle Bulkhead | ✓ 1 1/2" Wood door, manipulated both sides. |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks | ✓ 6'6" steel door, permanently attached, fitted with bolts inside. |
| Exposed Machinery Casings on Super-structure Decks | ✓ |
| Machinery Casings within Superstructures not fitted with Class I Closing 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 shown on the following sketches:—



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

The survey was carried out afloat and was confined to the items detailed in this Report.

Trade: General Boasting.

The following information was received from the Builder:—

std. disp. at 55% mld. depth = 1120 tons.

| Disp. | Full disp. | T.R.I. |
|-------|------------|--------|
| 10' | 914 | 9.4 |
| 11' | 1026 | 9.5 |
| 12' | 1139 | 9.6 |

Please add the following to items to do:— (i) E.R. Kent and tidley covers to repair.

(ii) Wood platform for gangway (see sketch) to repair.

(iii) Doors to trichy. space to repair to enable them to shut properly. Also bolts to repair. (Doors cannot be manipulated both side)

NOTE: The Owners request the favour of the earliest possible reply.

Rt.

Builder's name and yard number

Scott and Sons N° 295.

Names of sister ships

NOT known.

Owners

Wm Robertson.

Fee £

6 : 16 : 0.

Received by me

[Signature]



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