

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 31359
(For London Office only.)

No. 19302

MAY 1932

 having *Poop, Bridge & Forecastle*
 Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
Port of Survey *Swansea*Date of Survey *18th & 19th May, 1932*Name of Surveyor *Hannish Welf. Paton*Particulars of Classification *+100A1*

(Type of Superstructures.)

Ship's Name

Jarnworth

Nationality and Port of Registry

British Newcastle

Official Number

148086

Gross Tonnage

4944

Date of Build

*1924.*Moulded Dimensions: Length *400-0* Breadth *53-0* Depth *29-7 1/2*Moulded displacement at moulded draught = 85 per cent. of moulded depth *11656* tonsCoefficient of fineness for use with Tables *.764*

Depth for Freeboard (D)

Moulded depth ... *29-7 1/2*Stringer plate ... *5/8*

Sheathing on exposed deck

 $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = *29.67*

Depth correction

(a) Where D is greater than Table depth

(D-Table depth) R =

(29.67 - 26.67) x 3.00 = + 9.00

(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) *53*Standard Round of Beam = $\frac{B \times 12}{50} = 12.72$ Ship's Round of Beam = *13*Difference *.28*

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.28}{4} \times \left(1 - \frac{.475}{.5245} \right) = .04$

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|------------|-------------------|----------------------|
| Poop enclosed ... | <i>36-4</i> | <i>36.33</i> | <i>8-0</i> | | <i>36.33</i> |
| " overhang ... | <i>NIL</i> | | | | |
| R.Q.D. enclosed ... | <i>✓</i> | | | | |
| " overhang ... | <i>✓</i> | | | | |
| Bridge enclosed... | <i>117-6</i> | <i>117.50</i> | <i>8-0</i> | | <i>117.50</i> |
| " overhang aft ... | <i>2-6</i> | <i>1.87</i> | | | <i>1.87</i> |
| " overhang forward | <i>NIL</i> | | | | |
| F'cle enclosed ... | <i>34-6</i> | <i>34.50</i> | <i>8-0</i> | | <i>34.60</i> |
| " overhang ... | <i>NIL</i> | | | | |
| Trunk aft ... | | | | | |
| " forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| " " forward | | | | | |
| Total ... | <i>190.83</i> | <i>190.20</i> | | | <i>190.20</i> |

Standard Height of Superstructure *7-50*" " R.Q.D. *✓*Deduction for complete superstructure *42.00*Percentage covered $\frac{S}{L} = 47.71$ " " $\frac{S_1}{L} = 47.55$ " " $\frac{E}{L} = 47.55$

Percentage from Table, Line A.

(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)

Deduction = *42.00 x .3391 = - 14.24*

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|------------------------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|---------------|
| A.P. ... | <i>60.00</i> | 1 | | <i>50.00</i> | <i>60"</i> | <i>60.00</i> | 1 | | <i>60.00</i> |
| $\frac{1}{8}L$ from A.P. ... | <i>22.25</i> | 4 | | <i>89.00</i> | <i>26"</i> | <i>26.46</i> | 4 | | <i>105.84</i> |
| $\frac{2}{8}L$ " ... | <i>8.50</i> | 2 | | <i>11.00</i> | <i>6"</i> | <i>6.60</i> | 2 | | <i>12.20</i> |
| Amidships ... | <i>—</i> | 4 | | <i>—</i> | <i>—</i> | <i>—</i> | 4 | | <i>—</i> |
| $\frac{3}{8}L$ from F.P. ... | <i>11.00</i> | 2 | | <i>22.00</i> | <i>13"</i> | <i>13.20</i> | 2 | | <i>26.40</i> |
| $\frac{4}{8}L$ " ... | <i>4.50</i> | 4 | | <i>178.00</i> | <i>52"</i> | <i>52.92</i> | 4 | | <i>211.68</i> |
| F.P. ... | <i>100.00</i> | 1 | | <i>100.00</i> | <i>120"</i> | <i>120.00</i> | 1 | | <i>120.00</i> |
| Total ... | | | | <i>450.00</i> | | | | | <i>537.12</i> |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{87.12}{18} \left(.75 - \frac{.2385}{.5115} \right) = - 2.47$

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 = *29.67*Summer freeboard = *5.69*Moulded draught (d) = *23.98*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *5.99 = 6"*

Addition for Winter North Atlantic Freeboard (if required =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 11072$

Tons per inch immersion at summer load water line

T = *12*Deduction = $\frac{\Delta}{40T}$ inches= *6.59 = 6"*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.764 + .68}{1.36} = \frac{1.444}{1.36}$ Depth Correction ... *9.00*Deduction for superstructures ... *14.24*Sheer correction ... *2.47*Round of Beam correction ... *.04*

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

9.00 16.75 = 7.75

Summer Freeboard = *68.16*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood, Steel, Deck~~:Tropical Fresh Water Line above Centre of Disc ... *12"*Fresh Water Line " " ... *6 1/2"*Tropical Line " " ... *6"*Winter Line below " " ... *6"*Winter North Atlantic Line " " ... *6"*Tropical Fresh Water Freeboard ... *5' 8 1/4"*Fresh Water " " ... *4' 7 3/4"*Tropical " " ... *5' 1 3/4"*Winter " " ... *5' 2 1/4"*Winter North Atlantic " " ... *6' 2 1/4"*

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

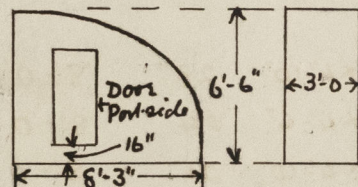
| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | | | |
|---|--|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Freeboard Deck | | | | | | | | | | | |
| Description of Hatchway | NO1 | NO2 | NO3 | NO4 | NO5 | NO6 | Bridge Deck | Bridge deck side bulkhead | Bridge deck side bulkhead | Bridge deck side bulkhead | Bridge deck side bulkhead |
| Dimensions of Hatchway | 33'-9" x 22'-0" | 35'-0" x 22'-0" | 5'-0" x 22'-0" | 15'-0" x 22'-0" | 35'-0" x 22'-0" | 35'-0" x 22'-0" | 35'-0" x 22'-0" | 4'-4" x 4'-4" | 3'-4" x 5'-10" | 2'-3" x 2'-3" | 2'-0" x 1'-0" |
| COAMINGS | | | | | | | | | | | |
| Height above Deck | 30" | 30" | 30" | 30" | 30" | 30" | 30" | 30" | 30" | 30" | 30" |
| Thickness | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" |
| Sides | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" |
| Stiffeners | 8 x 3 x 5 BA | 2 x NO1 | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" | 4 1/4" |
| Brackets, Stays | 2-2" dia. R.S. | " | NIL | NIL | 2 x NO1 | 2 x NO1 | 2 x NO1 | 2 x NO1 | 2 x NO1 | 2 x NO1 | 2 x NO1 |
| HATCH BEAMS | | | | | | | | | | | |
| Number | 5 | 5 | NIL | 2 | 5 | 5 | 4 | | | | |
| Spacing | 5'-8" | 5'-11" | NIL | 5'-2" | 5'-11" | 5'-11" | 5'-0" | | | | |
| Scantling and Sketch | 4 1/2 x 3 x 4 1/4 Angles T.R.B. plate 4 1/2" 22" deep | 2 x NO1 | NIL | 2 x NO1 | 2 x NO1 | 2 x NO1 | 2 x NO1 | NIL | NIL | NIL | NIL |
| Bearing Surface | 4 1/2" | | | | | | | | | | |
| FORE AND AFTERS | | | | | | | | | | | |
| Number | NIL | NIL | NIL | NIL | NIL | NIL | NIL | NIL | NIL | NIL | NIL |
| Spacing | | | | | | | | | | | |
| Unsupported Lengths | | | | | | | | | | | |
| Scantling and Sketch | | | | | | | | | | | |
| Bearing Surface | | | | | | | | | | | |
| HATCH COVERS | | | | | | | | | | | |
| Material | W. Wood | W. Wood | W. Wood | W. Wood | W. Wood | W. Wood | W. Wood | W. Wood | W. Wood | W. Wood | W. Wood |
| Thickness | 3" | 3" | 3" | 3" | 3" | 3" | 3" | 3" | 3" | 3" | 3" |
| How fitted | F.A. | F.A. | F.A. | F.A. | F.A. | F.A. | F.A. | F.A. | F.A. | F.A. | F.A. |
| Bearing Surface | 3" | 3" | 3" | 3" | 3" | 3" | 3" | 2 1/2" | 3" | 3" | 2 1/2" |
| Spacing of Cleats | 22" | 22" | 22" | 22" | 22" | 22" | 22" | 23" | 18" | 16" | 14" |
| Number of Tarpaulins | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| *Are wood fore and afters steel shod at all bearing surfaces? <i>yes</i> Are battens and wedges efficient and in good condition? <i>yes</i> Are tarpaulins in good condition and in accordance with rule requirements? <i>yes</i> Are lashings provided in accordance with rule requirements? <i>yes</i> | | | | | | | | | | | |

Particulars of fiddle, funnel and ventilator coamings:—
 Steel deck, gratings with hinged steel covers. Main funnel
 riveted bideck, Engine room & Galley skylights steel, with hinged steel
 flaps & glass circles. 2-25" Ventilators to Boiler room 1/4" plating.
 2-18" Ventilators to Engine room. Coaming 4'-0" high x 1/4" thick.
 Bunker Hatch 7'-0" x 14'-0" Coaming 9" x 3 1/2" x 4 1/4" BA. 3" Wood Hatches fitted F.A.
 cleats spaced 24". Hatch bearing 3". Tarpaulins 3.

Particulars of Flush Bunker Scuttles:—

NIL

Particulars of Companionways:—



Steel Companion way to crews quarters on Poop. 32 plating
 Hinged Teak wood door on Port side, sill 16" high door 2'-2" x 4'-8"
 Angle stiffeners 2 x 2 x 1/4 OA. door manipulated from both sides.

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

Forecastle, 2-24" Ventilators Coaming 36" high x 38"
 B. deck 4-24" " " 31" " x 38"
 " " 2-28" " 1/4" plating to Boiler room.
 A. Well 4-18" " Coaming 36" high x 38"
 Poop 1-24" " 26" " x 38"

wood plating & canvas
 covers provided

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

Air pipes fitted with Brass screwed caps in deck.
 no goosenecks.

Particulars of Gangway Cargo and Coaling Ports:—

NIL

Particulars of Scuppers and Sanitary Discharge Pipes —

Poop, 4-4" W.C. discharges with storm valves on ship side
 " 2-2 1/2 Washhouse discharges no valves " " "
 Bridge deck, 3-4" W.C. discharges with storm valves " " "
 " " 3-2 1/2 Bath " " " " "
 " " 4-2" Pantry & galley discharges no valves " " "
 all these discharges are above the freeboard deck.

Particulars of Side Scuttles:—

Glass circles in hinged Brass frames & fitted with
 C.I. hinged deadlights, fitted in Poop, Bridge space &
 Forecastle.

Particulars of Guard Rails:—

Three tier steel rails 3'-6" high stanchions spaced
 5'-3" apart, fitted round Poop and Forecastle and
 Bridge deck.

Particulars of Gangways, Lifelines, etc.:—

NONE.

Lifelines fitted for Stanchions in
 after well.

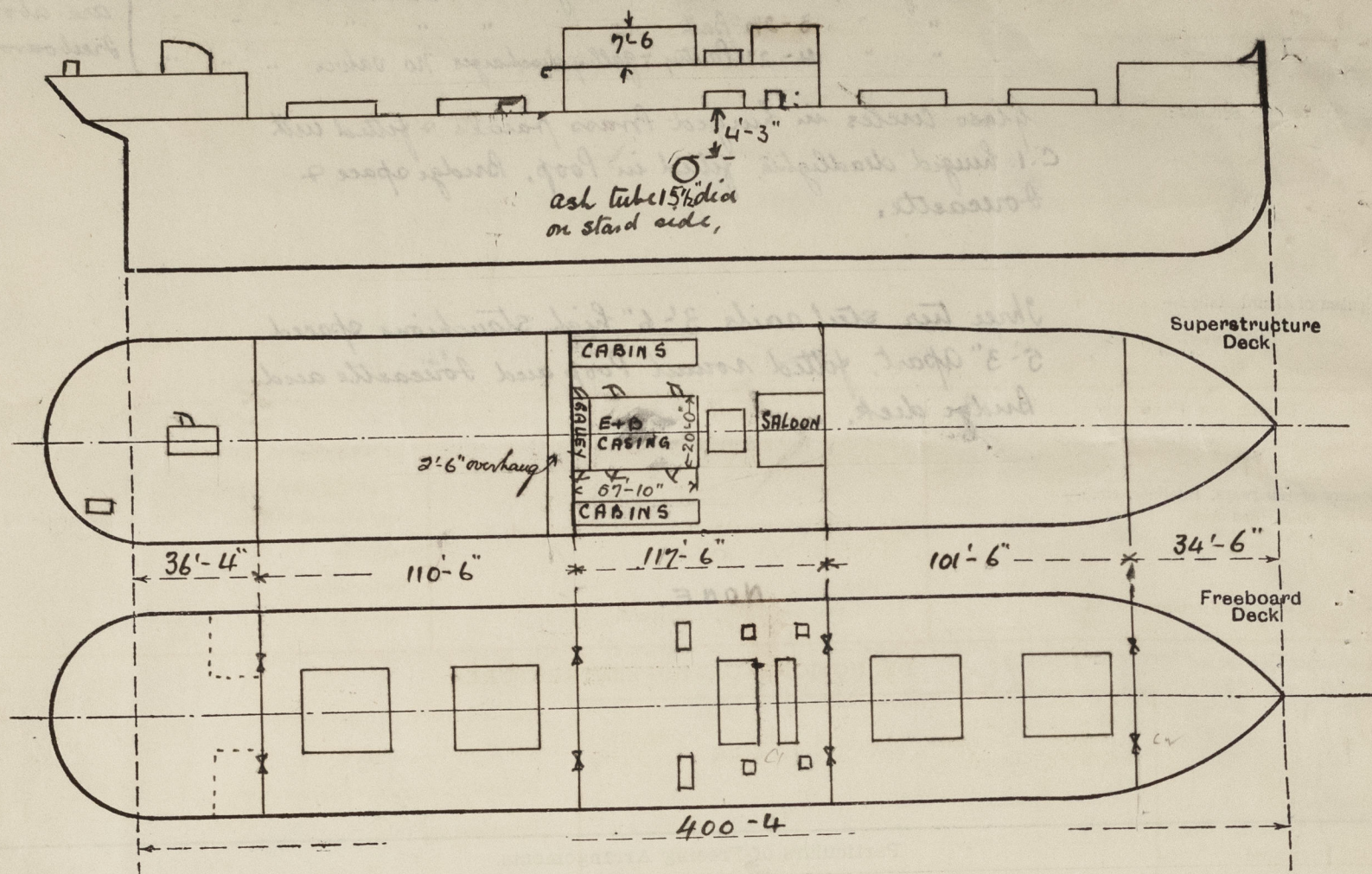
| Particulars of Freeing Arrangements. | | | | | | |
|---|-------------------|-------------------|-----------------------|------------------|----------------|---------------------|
| | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
| After Well | 110'-6" | 3'-6" | 4'-9" x 1'-7" | 6 | 45 sq ft | 22.1 sq ft |
| Forward Well | 101'-6" | 3'-6" | 4'-9" x 1'-7" | 6 | 45 sq ft | 20.3 sq ft |
| State position of each freeing port ... After Well: F 11'-4" x 11'-9" x 12'-2" x 13'-10" x 7'-0" x 6'-6" x 10'-5" x 15'-0" (F. and A. position and height above deck edge) Forward Well: F 12'-0" x 13'-0" x 12'-6" x 11'-10" x 12'-6" x 6'-7" x 10'-7" x 15'-0" State whether the freeing ports are fitted with ... and give particulars of such:— one horizontal angle bar 5 x 3 x 1/4" 15" Additional area where sheer is less than standard. FOR W. WELL F 15'-0" x 13'-0" x 12'-6" x 11'-10" x 12'-6" x 6'-7" x 10'-7" x 15'-0" | | | | | | |

| 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 | 38" | 38" | 6 1/2 x 3 1/2 x 4 1/4 OA 7 1/2 x 3 x 4 1/4 BA | 2'-4" | Lugs Top and bottom | 2'-2" x 5'-0" | 24" | 8'-0" |
| Raised Quarter Deck Bulkhead | | | | | | | | |
| Bridge, After Bulkhead | 38" | 38" | 3 x 3 x 38 OA | 2'-6" | NIL | 4'-0" x 4'-10" | 23" | 8'-0" |
| Bridge, Forward Bulkhead | 44" | 44" | 9 x 3 1/2 x 5 OA | 2'-4" | Lugs Top and bottom | 3'-6" x 4'-6" | 24" | 8'-0" |
| Forecastle Bulkhead | 32" | 32" | 3 x 3 x 38 OA | 2'-3" | NIL | 4'-0" x 4'-10" | 24" | 8'-0" |
| Trunk, Aft | | | | | | | | |
| Trunk, Forward | | | | | | | | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | | | | | | | | |
| Exposed Machinery Casings on Superstructure Decks | | 32" | 3 x 3 x 38 OA | 2'-6" | NIL | 2'-0" x 4'-10" | 20" | 7'-6" |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | | 30" | 3 x 3 angles | 30" | | feebly door P.S. 5' x 2' | 19" | |
| Deckhouses on Flush Deck Ships | | | | | | | | |

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

| | |
|---|--|
| Poop Bulkhead | Hinged Teak wood doors to W.C. manipulated from both sides. Hinged portlights no deads |
| Raised Quarter Deck Bulkhead | |
| Bridge, After Bulkhead | Riveted channels full height & weather boards 3" thick |
| Bridge, Forward Bulkhead | Hinged steel W.T. door, manipulated from both sides by steel handles on wedge pieces |
| Forecastle Bulkhead | Riveted channels full height & weather boards 3" thick. |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | |
| Exposed Machinery Casings on Superstructure Decks | Steel hinged doors, manipulated from both sides. |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | Hinged steel doors manipulated from both sides. |
| 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:—

Vessel loading afloat when particulars taken.

Builder's name and yard number

Blythwood S. B. Co Ltd

Names of sister ships

Owners

Dalglish Steam Shipping Co Ltd

Fee £ *12* : *15* : *0*

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