

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having FORECASTLE AND COMBINED POOP, QUARTERDECK AND BRIDGE

Port of Survey ROTTERDAM

(Type of Superstructures.)

Date of Survey 7-9/1/33

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

LLANTWIT MAJOR

BRITISH

129330

2298

1913-8

Name of Surveyor Wm. der Mel

Moulded Dimensions: Length 289.75 Breadth 40.5 Depth 20.0

Moulded displacement at moulded draught = 85 per cent. of moulded depth 4478 tons

Coefficient of fineness for use with Tables 786

Particulars of Classification 17.100 A 1

S.S. Off. No. 3.12.25
S.S. Skm. No. 1.28

Depth for Freeboard (D)

Moulded depth ... 20.00

Stringer plate ... COULD NOT BE ASCERTAINED

Sheathing on exposed deck

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

Depth for Freeboard (D) = 20.05

Depth correction

(a) Where D is greater than Table depth

(D-Table depth) R =

$$(20.05 - 19.31) \times 2.229 = +1.65$$

(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) 40.5

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 9.72$$

$$\text{Ship's Round of Beam} = 10$$

Difference excess .28

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.28}{4} \left(1 - \frac{.6782}{1} \right) = .02$$

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|----------------------------------|-------------------------|--|------------|-------------------|----------------------|
| Poop enclosed ... | <u>24.0</u> | <u>24.00</u> | <u>7.0</u> | | <u>24.00</u> |
| " overhang ... | | | | | |
| R.Q.D. enclosed ... | <u>90.0</u> | <u>90.00</u> | <u>4.0</u> | <u>4.00</u> | <u>79.52</u> |
| " overhang ... | | | | | |
| Bridge enclosed ... | <u>53.0</u> | <u>53.00</u> | <u>7.0</u> | | <u>53.00</u> |
| " overhang aft ... | | | | | |
| " overhang forward ... | | | | | |
| F'cle enclosed <u>excess</u> ... | <u>27.55</u> | <u>27.55</u> | <u>7.0</u> | | <u>27.55</u> |
| " overhang ... | <u>3.45</u> | <u>1.94</u> | | | <u>1.94</u> |
| Trunk aft ... | | | | | |
| " forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| " forward ... | | | | | |
| Total ... | <u>197.00</u> | <u>196.49</u> | | | <u>186.01</u> |

Standard Height of Superstructure 6.3975

" " R.Q.D. 4.5275

Deduction for complete superstructure 34.65

$$\text{Percentage covered } \frac{S}{L} = 68.00\%$$

$$\frac{S_1}{L} = 67.82\%$$

$$\frac{E}{L} = 64.20\%$$

Percentage from Table, Line A. 53.14

(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)

$$\text{Deduction} = 34.65 \times .5314 = 18.41$$

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|-----------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|---------------|
| P. ... | <u>38.97</u> | 1 | | <u>38.97</u> | <u>45.00</u> | <u>45.00</u> | 1 | | <u>45.00</u> |
| L from A.P. ... | <u>17.34</u> | 4 | | <u>69.36</u> | <u>20.94</u> | <u>20.94</u> | 4 | | <u>83.76</u> |
| " " ... | <u>4.29</u> | 2 | | <u>8.58</u> | <u>5.22</u> | <u>5.22</u> | 2 | | <u>10.44</u> |
| amidships ... | - | 4 | | - | - | - | 4 | | - |
| L from F.P. ... | <u>8.57</u> | 2 | | <u>17.14</u> | <u>9.80</u> | <u>9.80</u> | 2 | | <u>19.60</u> |
| " " ... | <u>34.68</u> | 4 | | <u>138.72</u> | <u>39.30</u> | <u>39.30</u> | 4 | | <u>157.20</u> |
| P. ... | <u>77.94</u> | 1 | | <u>77.94</u> | <u>90.00</u> | <u>90.00</u> | 1 | | <u>90.00</u> |
| Total ... | | | | <u>350.73</u> | | | | | <u>406.00</u> |

Mean actual sheer aft = excess
Mean standard sheer aft =

Mean actual sheer forward = excess
Mean standard sheer forward =

$$\text{Length of enclosed superstructure forward of amidships} = \frac{22.13}{289.75} = .076$$

$$\text{aft of } = .50 = .50$$

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{350.73 - 406.00}{18} \left(\frac{.75 - .3400}{1} \right) = (-) 1.26$$

$$\text{If limited on account of midship superstructure, } \frac{.176}{2.10} \times \frac{1.26}{1} = (-) 1.11$$

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 = 20.05

Summer freeboard = 2.19

Moulded draught (d) = 17.86

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 4.46 = 4 1/2

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

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

=

COULD NOT BE OBTAINED

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$$\frac{786 + .68}{136} = \frac{1.466}{1.36}$$

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

| | + | - |
|--|-------------|--------------|
| Depth Correction | <u>1.65</u> | |
| Deduction for superstructures | | <u>18.41</u> |
| Sheer correction | | <u>1.11</u> |
| Round of Beam correction | | <u>.02</u> |
| Correction for Thickness of Deck amidships | | |
| Other corrections, scantlings, etc. | | |
| | <u>1.65</u> | <u>19.54</u> |

Summer Freeboard = 26.24

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

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 ...

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2'-6 3/4"

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W1330-0208 1/2

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | |
|---|-----------------------|-------------------|-----|-------------|-----|---|--|--|--|
| Description of Hatchway | | FOREWELL | | QUARTERDECK | | | | | |
| Dimensions of Hatchway | | I | II | III | IV | | | | |
| COAMINGS | Height above Deck | ... | ... | ... | ... | | | | |
| | Thickness | ... | ... | ... | ... | | | | |
| | Sides | ... | ... | ... | ... | | | | |
| | Ends | ... | ... | ... | ... | | | | |
| Stiffeners | ... | ... | ... | ... | ... | | | | |
| | Brackets, Stays | ... | ... | ... | ... | | | | |
| | | NONE FITTED. | | | | RECOMMENDED FORWARD COAMING N° III TO BE FITTED WITH BRACKET | | | |
| 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 | | NOT EXCEEDING 24" | | | | | | | |
| Number of Tarpaulins | | 2 | | | | | | | |
| | | 2 | | | | | | | |

*Are wood fore and afters steel shod at all bearing surfaces? ☒

Are battens and wedges efficient and in good condition? ☒ ~~GOOD WEDGES TO BE SUPPLIED FOR COAL HATCHES~~

Are tarpaulins in good condition and in accordance with rule requirements? ☒ ~~OF COAL HATCHES GOOD. TARPAILINS OF COAL HATCHES TO BE COMPLETED.~~

Are lashings provided in accordance with rule requirements? ☒ ~~STEEL WIRE LASHINGS AVAILABLE~~

Particulars of fiddle, funnel and ventilator coamings:— Exposed fiddle coaming on bridge deck, 3'-6" high. Fiddle, top coaming, funnel, ventilator coamings, engine room skylight, and saddleback hatch of substantial construction and in good condition. Saddleback hatch see page 4. Fiddle gratings fitted with hinged steel covers. ~~Recommend all doors of big ventilators to be overhauled.~~

Particulars of Flush Bunker Scuttles:—

none fitted.

Particulars of Companionways:—

On poop deck a steel companion plate 20" giving access to accommodations. At after end double teak door, doubly hinged, in a wood frame. Opening 4'-2" x 3'-4" wide. Sill 12" above wood deck.

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

| | | | | | | |
|-------------|---|-------|----------|---------------|----------------|---|
| Foredeck | 3 | VENTS | DIA. 10" | COAMING | 20" x 36" | |
| Forewell | 1 | " | 12" | " | 4'3" x 36" | PROTECTED BY HATCH COAMING AND BULWARK. |
| Bridge deck | 2 | " | 12" | " | 18" x 36" | |
| Quarterdeck | 1 | " | 11" | " | 36" x 36" | |
| Poop deck | 1 | " | 6" | COAMING HOLED | TO BE RENEWED. | Wood plngs and canvas covers available. |
| | 2 | " | 96" | " | 18" x 36" | |
| | 2 | " | " | " | 18" x 36" | |

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

no air pipes fitted.

Particulars of Gangway Cargo and Coaling Ports:—

none fitted.



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Particulars of Scuppers and Sanitary Discharge Pipes

All sanitary discharge pipes lead from spaces situated above the freeboard deck and are fitted with storm valves.

Particulars of Side Scuttles:

In fore, in peak tween decks, in poopsides and in bridge after bulkhead and side on S.S. fitted with hinged steel deadlights. Construction good.
3 Portlights in forefront and 1 in after end bridge not fitted with deadlights.

Particulars of Guard Rails:—

On forecandle deck, portable stanchions in sockets. Stanchions 39", spaced 5'-4". One chain and a wire rope through stanchions.
On foredeck open rail, 2 rods, riveted stanchions 38" x 5'-4".
Bridge bulwark 3'-6" forms no well.

Particulars of Gangways, Lifelines, etc.:—

Manilla lifelines are available and it is a practice to fit same in bad weather in both wells.

Bulwark forewell 3'-10" Stanchions 17" x 32" x 5'-10"
" quarterdeck 3'-8" " " " "

Particulars of Freeing Arrangements.

| | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
|---|-------------------|-------------------|-----------------------|------------------|---------------------|---------------------|
| | | | OVAL | | | |
| After Well | 90' 0 | 3' 25" | 3.25 x 1.87 | 4 | 19.1 f ² | 18.0 |
| Forward Well | 96' 5 | 3' 10" | 3.25 x 1.87 | 4 | 24.1 f ² | 19.3 |
| State position of each freeing port { After Well:— (F. and A. position and height above deck edge) { Forward Well:— EDGES 12" | | | | | | |
| State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 2 HORIZONTAL RODS. | | | | | | |
| Additional area where sheer is less than standard. | | | | | | |

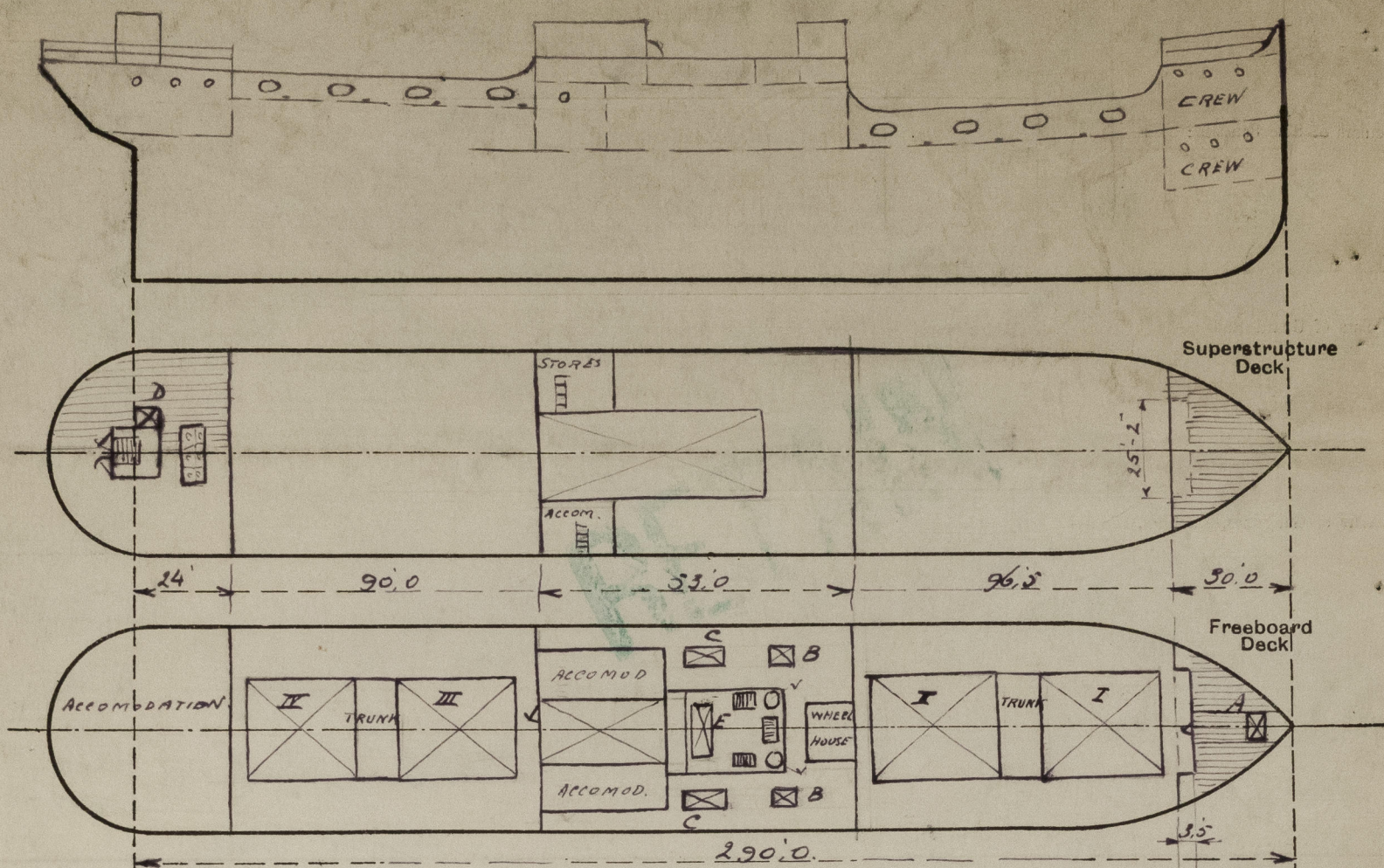
Particulars of Superstructures, Trunks, Casings, Deckhouses.

| | Coaming | Plating | Stiffeners | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
|--|----------|---------|-------------------|---------|-------------------------------|------------------|-------------------------------|-------------------|
| Poop Bulkhead | ✓ | .36" | | | | ✓ | ✓ | 3'-0" |
| Raised Quarter Deck Bulkhead ... | — | | | | | | | |
| Bridge, After Bulkhead | VERTICAL | .32" | 4 5 1/2 x 3 x .25 | 39" | ALSO 1 WEBSTIFFENER ✓ | EACH SIDE ✓ | ✓ | |
| Bridge, Forward Bulkhead | VERTICAL | .40" | BA 7 x 3 x .42 | 30" | BRACKETS ✓ | ✓ | ✓ | |
| Forecastle Bulkhead | VERTICAL | .30" | 4 3 1/2 x 3 x .26 | 29" | ✓ | 4'-5" x 2'-0" | 18" | |
| Trunk, Aft | — | | | | | | | |
| Trunk, Forward | — | | | | | | | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks ... | — | | | | | | | |
| Exposed Machinery Casings on Superstructure Decks BRIDGE DECK ... | — | .28" | 4 3 1/2 x 3 x .28 | 4'-0" | ✓ | 5'-4" x 2'-0" | 4'-0" | 3'-6" FORWARD |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | — | | | | | | ABOVE QUARTER 7'-0" AFT DECK. | |
| Deckhouses on Flush Deck Ships ... | — | | | | | | | |

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

| | |
|--|---|
| Poop Bulkhead | No openings. |
| Raised Quarter Deck Bulkhead ... | ✓ |
| Bridge, After Bulkhead | No openings. |
| Bridge, Forward Bulkhead | No openings. |
| Forecastle Bulkhead | Ordinary hinged steel doors, operated from 2 sides. |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks ... | Ordinary hinged steel door at after end, sill 4'-0" above quarter deck. |
| Exposed Machinery Casings on Superstructure 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:—



Hatch A in freeboard deck inside forecabin, hatch; dimensions 3'-10" x 2'-8", giving access to four decks accommodation. No battening down arrangement.

Hatch B on bridgedeck 3'-6" x 2'-5"

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

Hatch C on bridgedeck 7'-10" x 2'-5"

Coamings 15" x 36", bearing surface 2"

Hatches to be put in order.

Surfboards to be completed.

Store hatch D on poop deck 3'-10" x 2'-10"; Coaming 15"; Complete battening down arrangement.

Hatch saddleback on exposed casing, E, 3'-6" above bridgedeck.

Coaming 7"

Hatches to be put in order.

One bearing angle (wanted) to be renewed.

On poop deck, above accommodation a wood skylight, strongly constructed. H=25". Battening down arrangement.

The freeboard survey has been carried out afloat.

Builder's name and yard number J. Brown Sunderland.

Names of sister ships

Owners

Morfa Steam Navigation Co. (Jones Doughty & Co. Ltd.)

Fee £ 122.40

Will be Received by me

Expenses £ 6.00

Robertson 10th January 1933

Robertson



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