

11 APR 1932

Index No. 32242
(For London Office only.)

Rpt. C.13

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Pool Bridge Forecastle
(Type of Superstructures.)
Port of Survey Newcastle
Date of Survey 6th 7th April 1932
Ship's Name "Camersa BADTESTAN"
Nationality and Port of Registry British Newcastle
Official Number 149451
Gross Tonnage 5573
Date of Build 1928-3
Name of Surveyor P. Browne
Particulars of Classification +100 A1.
Moulded Dimensions: Length 395.0 Breadth 53.75 Depth 31.50
Moulded displacement at moulded draught = 85 per cent. of moulded depth 73090 tons
Coefficient of fineness for use with Tables .806

Depth for Freeboard (D)
Moulded depth ... 31.50
Stringer plate .4003
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$ ✓
Depth for Freeboard (D) = 31.53
Depth correction
(a) Where D is greater than Table depth
(D - Table depth) R = (31.53 - 26.33) 3 = +15.60
(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) 53.75
Standard Round of Beam = $\frac{B \times 12}{50} =$ 12.9
Ship's Round of Beam = 15
Difference 2.1
Restricted to .5535
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2.1}{4} \times (1 - .4465) =$.5535

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|--------|-------------------|----------------------|
| Poop enclosed ... | 34.75 | 34.75 | 8.0 | ✓ | 34.75 |
| " overhang ... | - | - | - | - | - |
| R.Q.D. enclosed ... | 105.00 | 105.00 | 8.0 | ✓ | 105.00 |
| " overhang ... | 107.79 | 105.00 | 8.0 | ✓ | 105.00 |
| Bridge enclosed ... | - | - | - | - | - |
| " overhang aft ... | - | - | - | - | - |
| " overhang forward ... | -2.79 | 1.39 | - | - | 1.39 |
| Fore enclosed ... | 35.25 | 35.25 | 8.0 | ✓ | 35.25 |
| " overhang ... | - | - | - | - | - |
| Trunk aft ... | - | - | - | - | - |
| " forward ... | - | - | - | - | - |
| Tonnage opening aft ... | - | - | - | - | - |
| " forward ... | - | - | - | - | - |
| Total ... | 177.79 | 176.39 | - | - | 176.39 |

Standard Height of Superstructure 7.45
B.Q.D. ✓
Deduction for complete superstructure 41.67
Percentage covered $\frac{S}{L} =$ 45.01%
" $\frac{S_1}{L} =$ 44.65%
" $\frac{E}{L} =$ 44.65%
Percentage from Table, Line A.
(corrected for absence of forecastle (if required)) 31.45%
Percentage from Table, Line B.
(corrected for absence of forecastle (if required)) ✓
Interpolation for bridge less than 2L (if required) ✓
Deduction = 41.67 \times .3145 = -13.10

SHEER CORRECTION.

| Station | Standard Ordinate | S M | Product | Actual Ordinate | Effective Ordinate | S M | Product |
|-------------------------------|-------------------|-----|---------|-----------------|--------------------|---------------------|---------|
| A.P. ... | 49.50 | 1 | 49.50 | 79.50 | 79.50 | 79.50 ¹ | 79.50 |
| $\frac{1}{2}$ L from A.P. ... | 22.03 | 4 | 88.12 | 23.00 | 33.38 | 33.38 ⁴ | 133.52 |
| $\frac{2}{3}$ L " ... | 5.44 | 2 | 10.88 | 8.50 | 8.34 | 8.34 ² | 16.68 |
| Amidships ... | ✓ | 4 | ✓ | ✓ | ✓ | ✓ | ✓ |
| $\frac{3}{4}$ L from F.P. ... | 10.89 | 2 | 21.78 | 13.00 | 12.94 | 12.94 ² | 25.88 |
| $\frac{1}{2}$ L " ... | 44.06 | 4 | 176.24 | 52.00 | 51.75 | 51.75 ⁴ | 207.00 |
| F.P. ... | 99.00 | 1 | 99.00 | 111.75 | 111.75 | 111.75 ¹ | 111.75 |
| Total ... | | | 445.52 | | | | 574.33 |

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{79.50 - 22.5}{18} =$ 3.76

If limited on account of midship superstructure.

Mean actual sheer aft = Excess
Mean standard sheer aft

Mean actual sheer forward = Excess
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = .151
" " aft of " = .115

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 31.53
Summer freeboard = 6.25
Moulded draught (d) = 25.28

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.32 = 6 $\frac{1}{4}$

Addition for Winter North Atlantic Freeboard (if required = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ 12372

Tons per inch immersion at summer load water line

T = 143.72

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

= 7.08

= 7"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.806 + .68}{1.36} =$ 1.486

+ 15.60

Depth Correction ... 13.10

Deduction for superstructures ... 3.76

Sheer correction29

Round of Beam correction ... 1.55

Correction for Thickness of Deck amidships ... 15.60

Other corrections, scantlings, etc. ... 17.15

Summer Freeboard = 74.89

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

| | |
|--|--------------------------|
| Tropical Fresh Water Line above Centre of Disc | ... 13 $\frac{1}{4}$... |
| Fresh Water Line | ... 7 ... |
| Tropical Line | ... 6 $\frac{1}{4}$... |
| Winter Line below | ... 6 $\frac{1}{4}$... |
| 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 | | | | | | | | | | | | | |
|---|----------------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Upper Decks | | | | | | | | | | | | | |
| Description of Hatchway | No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6 | No. 7 | No. 8 | No. 9 | No. 10 | No. 11 | No. 12 | No. 13 |
| Dimensions of Hatchway | 31'6" x 20' | 32'6" x 20' | 12'4" x 20' | 13'6" x 20' | 32'6" x 20' | 30'0" x 20' | 21'4" x 20'0" | 21'4" x 20'0" | 21'4" x 20'0" | 21'4" x 20'0" | 21'4" x 20'0" | 21'4" x 20'0" | 21'4" x 20'0" |
| COAMINGS | Height above Deck | 46 1/2" | 49 1/2" | 46" | 46" | 39 1/2" | 39 1/2" | 30" | 30" | 30" | 30" | 30" | 30" |
| | Thickness | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" |
| | Sides | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" | 44" |
| | Stiffeners | 3 x 408A | 3 x 408A | 3 x 408A | 3 x 408A | 3 x 408A | 3 x 408A | 3 x 408A | 3 x 408A | 3 x 408A | 3 x 408A | 3 x 408A | 3 x 408A |
| HATCH BEAMS | Brackets, Stays | 2 1/2 dia | 35" | 35" | 35" | 35" | 35" | 35" | 35" | 35" | 35" | 35" | 35" |
| | Number | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | Spacing | 4'6" | 4'8" | 4'8" | 4'8" | 4'8" | 4'8" | 4'8" | 4'8" | 4'8" | 4'8" | 4'8" | 4'8" |
| | Scantling and Sketch | 17" x 36" | 17" x 36" | 17" x 36" | 17" x 36" | 17" x 36" | 17" x 36" | 17" x 36" | 17" x 36" | 17" x 36" | 17" x 36" | 17" x 36" | 17" x 36" |
| FORE AND AFTERS | Bearing Surface | 3 1/2" | 3 1/2" | 3 1/2" | 3 1/2" | 3 1/2" | 3 1/2" | 3 1/2" | 3 1/2" | 3 1/2" | 3 1/2" | 3 1/2" | 3 1/2" |
| | Number | | | | | | | | | | | | |
| | Spacing | | | | | | | | | | | | |
| | Unsupported Lengths | | | | | | | | | | | | |
| HATCH COVERS | Material | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. |
| | Thickness | 3" | 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. | F.A. |
| | Bearing Surface | 3 1/4" | 3 1/4" | 3 1/4" | 3 1/4" | 3 1/4" | 3 1/4" | 3 1/4" | 3 1/4" | 3 1/4" | 3 1/4" | 3 1/4" | 3 1/4" |
| Spacing of Cleats | 21" | 22" | 21" | 21" | 21" | 21" | 21" | 21" | 21" | 21" | 21" | 21" | 21" |
| Number of Tarpaulins | 3 to each hatch | | | | | | | | | | | | |
| *Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/> | | | | | | | | | | | | | |

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle gratings are fitted with hinged steel covers. ✓
 E.R. skylight is steel. ✓
 Fiddle & funnel vents good. ✓

Particulars of Flush Bunker Scuttles:—

None. ✓

Particulars of Companionways:—

Pooh:— steel entrance house to crew's quarters with hinged steel door operating both sides. Bill 6 1/2". ✓
 Halls

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

Toile deck:— 2 @ 22" dia. led to hold. Coaming 34" x 40" ✓
 Halls:— hold vents are on top of steel houses 7'3" in height. ✓
 Pooh:— 2 @ 22" dia. led to deck tank. Coaming 36" x 40" ✓
 1 @ 9" " " " tunnel " 30" x 40" ✓
 33" x 30" ✓

Ventilators are in accordance with Rule requirements. ✓
 Closing—wood plugs & canvas covers. ✓

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

Toile deck:— 2 @ 5" dia. to F.P., D.B. tank. Height to mouth 10" ✓
 Fore well:— 2 @ 4" " " " " " 36" 11" ✓
 Bridge:— 4 @ 4 1/2" " " " " " 9" ✓
 aft well:— 2 @ 4" " " " " " 36" 11" ✓
 1 @ 3" " " " " " 46" ✓
 Pooh:— 1 @ 4 1/2" " " " " " 8" ✓

Air pipes fitted with wood plugs attached by chains, & canvas covers. ✓

Particulars of Gangway Cargo and Coaling Ports:—

None. ✓



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Particulars of Coppers and Sanitary Discharge Pipes —
W. P. discharges lead. No. 1. Storm valves fitted.
1 copper P. & S. from bridge space overboard. S.V.
1 copper P. & S. " force " " do s


Particulars of Side Scuttles: POOP - lock staves - hinged dead. lights fitted

Particulars of Guard Rails:—

Look & face of rails - 3 tier rails 3'-3" in height. Stanchions 4'-0" - 4'-6" apart.
Bridge deck - Bulwarks 3'-7" high. Stanchions 6 x 3 1/2 x 48 B.A. sh. 5'-6" (2 wash posts).
Wells 3'-6" 6 x 3 1/2 x 48 B.A. " 5'-0" - 6'-0" apart.

Eyeplates fitted on the superstructure and bulkheads in the forward and after wells for lifelines

| | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
|---------------------|-------------------|-------------------|-----------------------|------------------|--|---------------------|
| After Well | 114'-8½" ✓ | 3'-6" | 4.00' x 1.50' | 5 | 27.25 21.55 ¢ | 22.94 ¢ |
| Forward Well | 100'-0" ✓ | 3'-6" | 4.00' x 1.50' | 5 | 27.25 21.55 ¢ | 20.00 ¢ |

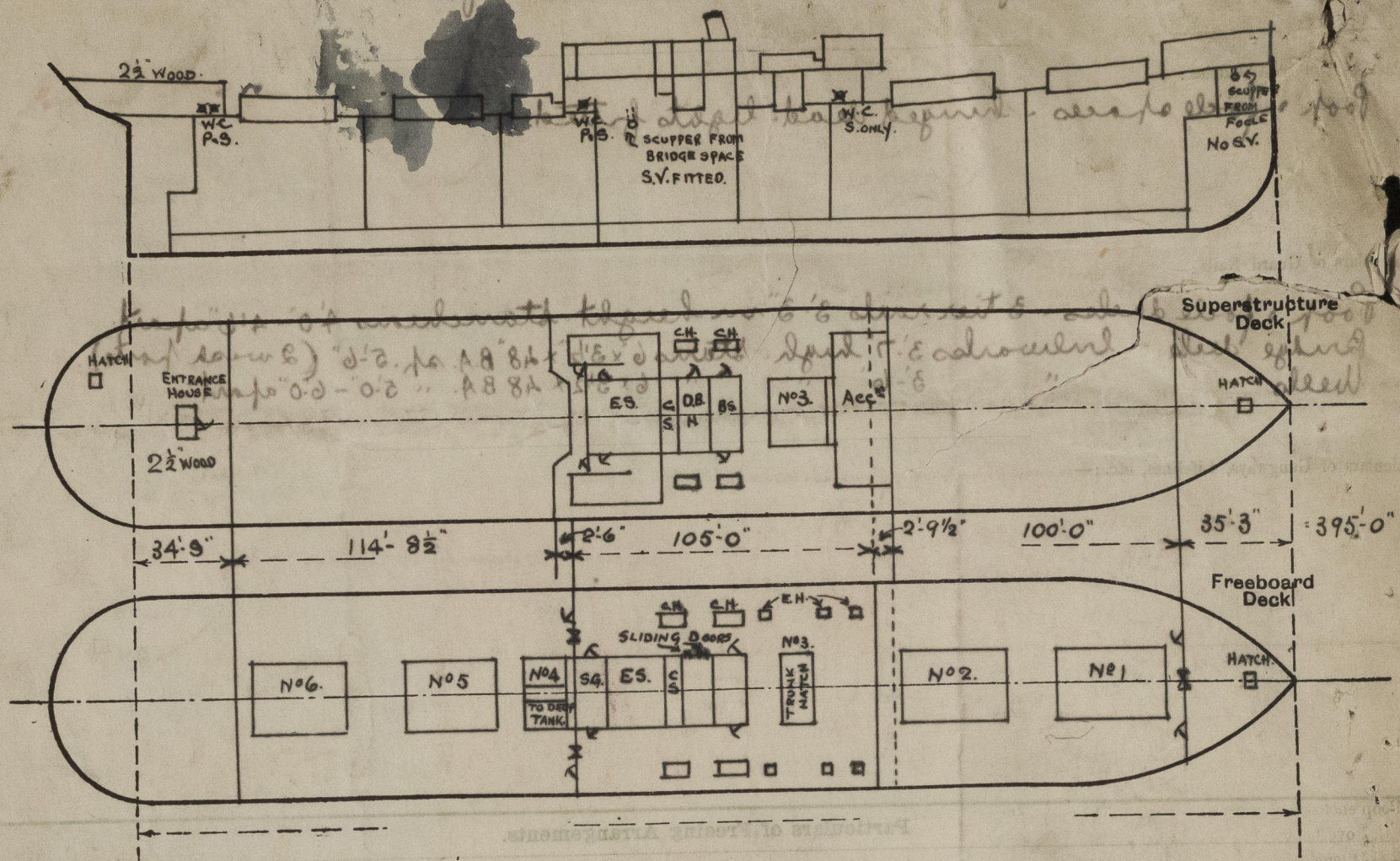
State position of each freeing port ... { After Well:— 6'-0" - 21'-0" - 46'-0" - 66'-0" - 86'-0" from bridge end. 13" above deck.
 F. and A. position and height above deck edge) { Forward Well:— 17'-0" - 37'-0" - 56'-0" - 76'-0" - 93'-0" " fore end. 15" " "
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—  single frame

Additional area where sheer is less than standard.

| | Coaming | Plating | Stiffeners | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
|---|---------|---------|------------------------|---------|-------------------------------|---|-------------------------|-------------------|
| oop Bulkhead | 40" ✓ | 38" ✓ | 6 x 3 1/2 x 50 L ✓ | 30" ✓ | Bltd. ✓ | Two 4 L 6" x 24" ✓ | 18" ✓ | |
| aised Quarter Deck Bulkhead ... | / | | | | | | | |
| ridge, After Bulkhead | - | 36" ✓ | 4 x 3 1/2 x 44" ✓ | 63" ✓ | None. ✓ | 2) 5' 5" x 40" ✓ 2) 4' 6" x 24" ✓ | 20" ✓ 18" ✓ | |
| ridge, Forward Bulkhead | 44" ✓ | 40" ✓ | 9" x 3 1/2" x 52" BA ✓ | 30" ✓ | Brackets ✓ | None ✓ | - | |
| recastle Bulkhead | - | 38" ✓ | 3 1/2 x 3 1/2 x 48" ✓ | 31" ✓ | None ✓ | 1) 5' 1" x 48" ✓ 2) 4' 5" x 24" ✓ | 15" ✓ 17" ✓ | |
| unk, Aft | / | | | | | | | |
| unk, Forward | / | | | | | | | |
| posed Machinery Casings on Free-board or Raised Quarter Decks ... | / | | | | | | | |
| posed Machinery Casings on Super-structure Decks | 40" ✓ | 36" ✓ | 4 1/2 x 3" x 44" ✓ | 42" ✓ | Part bltd. ✓ | Five 4' 8" x 24" ✓ | 18" ✓ | 7'-9" ✓ |
| achinery Casings within Superstructures not fitted with Class I Closing Appliances | 34" ✓ | 30" ✓ | 4 1/2 x 3" x 36" ✓ | 60" ✓ | Bltd. and 2 c m m ✓ | 4) 4' 9" x 24" ✓ 1) 5' 5" x 96" ✓ 1) 1' 10" x 15" ✓ | 20" ✓ 20" ✓ 20" ✓ | |
| Deckhouses on Flush Deck Ships ... | / | | | | | | | |

| | | |
|--|--|---------------------|
| Poop Bulkhead | Hinged steel doors - operating both sides. ✓ | 1/2 D.D. & matabond |
| Raised Quarter Deck Bulkhead ... | ✓ 2) plates with hook bolts spaced 15" x 21" apart (not thro' bulkhead plating). ✓ | 61 cc |
| Bridge, After Bulkhead | 2) hinged steel doors - operating both sides. ✓ | |
| Bridge, Forward Bulkhead | Intact ✓ 1) full height riveted channels & 3" boards. ✓ 2) hinged steel doors - operating both sides. ✓ | cc |
| Forecastle Bulkhead | ✓ | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks ... | ✓ | |
| Exposed Machinery Casings on Superstructure Decks | Hinged steel doors - operating both sides. ✓ | |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | 4) hinged steel doors - operating both sides. ✓ 1 horizontal or 1 vertical sliding steel door - operating one side only. (Note: These | |
| Deckhouses on Flush Deck Ships ... | ✓ sliding doors give access to D.B. house which is entirely enclosed) ✓ | |

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, garway, 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:—

No Timber Assignment required.

| DRAFT | △ | T.P. 1 |
|--------|-------|--------|
| 25'-0" | 12130 | 43.65 |
| 26'-0" | 12660 | 43.80 |

FRESH WATER

MLO DK = 25.28
 = 25'-3 1/2"
 Keel 25'-5 1/2"
 5 1/2 x 530 = 242
 12 x 530 = 242
 Δ @ W. 530 = 12130
 T.P. 1 = 43.72

Builder's name and yard number

Bartram & Sons, Ltd.

Names of sister ships

Owners Hindustan S.S. Co. Ltd.

Fee £ 13

APPLIED FOR - 9 APR 1932