

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Poop, Bridge & Forecastle

(Type of Superstructures.)

Ship's Name Theomitor Nationality and Port of Registry Greek Andros Official Number 4427 Gross Tonnage 1910-3 Date of Build 1910-3

Moulded Dimensions: Length 375-0 Breadth 51.75 Depth 27.92 tons 10522

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

Coefficient of fineness for use with Tables 80

Port of Survey Hull

Date of Survey Dec. 4th 1933

Name of Surveyor Malcolm

Particulars of Classification +100A1

Depth for Freeboard (D) 27.92

Moulded depth ... 27.92

Stringer plate ... 0.04

Sheathing on exposed deck none

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

Depth for Freeboard (D) = 27.96

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R = $(27.96 - 25.00) 2.884$
= + 8.54

(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) 51.75

Standard Round of Beam = $\frac{B \times 12}{50} = \frac{51.75 \times 12}{50} = 12.42$

Ship's Round of Beam = 13

Difference .58

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.58}{4} \times .512 = .074$

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|--------------------------------|-------------------------|--|--------|-------------------|----------------------|
| Poop enclosed ... | 32.7 | 32.70 | 8-0 | | 32.70 |
| " overhang ... | | | | | |
| R.Q.D. enclosed ... | | | | | |
| " overhang ... | | | | | |
| Bridge enclosed ... | 112.8 | 112.80 | 8-0 | | 112.80 |
| " overhang aft ... | | | | | |
| " overhang forward ... | | | | | |
| Fore enclosed <u>after</u> ... | 37.50 | 37.50 | 8-0 | | 37.50 |
| " overhang ... | | | | | |
| Trunk aft ... | | | | | |
| " forward ... | | | | | |
| Foremast opening aft ... | | | | | |
| " forward ... | | | | | |
| Total ... | 183.00 | 183.00 | | | 183.00 |

Standard Height of Superstructure 7.25

" " R.Q.D. ✓

Deduction for complete superstructure 40.33

Percentage covered $\frac{S}{L} = \frac{48.80}{100} = 48.80\%$

" " $\frac{S_1}{L} = \frac{48.80}{100} = 48.80\%$

" " $\frac{E}{L} = \frac{48.80}{100} = 48.80\%$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 34.98%
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $40.33 \times .3498 = -14.11$

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|---------------------|-------------------|---|---|---------|-----------------|--------------------|---|---|---------|
| A.P. ... | 47.50 | 1 | | 47.50 | 60.4 | 60.25 | 1 | | 60.25 |
| 1/8 L from A.P. ... | 21.135 | 4 | | 84.54 | 26.0 | 26.07 | 4 | | 104.28 |
| 2/8 L " ... | 5.225 | 2 | | 10.45 | 7.0 | 6.52 | 2 | | 13.04 |
| Amidships ... | | 4 | | | 0 | | 4 | | |
| 3/8 L from F.P. ... | 10.445 | 2 | | 20.89 | 14.0 | 13.43 | 2 | | 26.86 |
| 1/8 L " ... | 42.27 | 4 | | 169.08 | 35.0 | 33.71 | 4 | | 134.84 |
| F.P. ... | 95.00 | 1 | | 95.00 | 120.0 | 120.00 | 1 | | 120.00 |
| Total ... | 427 | | | 427.47 | | | | | 539.27 |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{111.80}{18} \left(\frac{.75 - .244}{.506} \right) = -3.14$

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 = > 1L

" " aft of " = > 1L

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = Ft.

Summer freeboard =

Moulded draught (d) =

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches =

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Tons per inch immersion at summer load water line

T =

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

TPI at LWL

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.80 + .68}{1.36} = \frac{1.48}{1.36}$

Depth Correction ... 8.54

Deduction for superstructures ... 14.11

Sheer correction ... 3.14

Round of Beam correction07

Correction for Thickness of Deck amidships ... ✓

Other corrections, scantlings, etc. ... ✓

Summer Freeboard = 60.71

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 " " ...

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | | |
|---|----------------------|----------------|--------------|----------------|----------------|--------------|--------------------------|--------------|------------|-------------------|
| Description of Hatchway | Upper Deck | | | | | | To Bulkhead | To Stairs | To Deck | To Poop Deck |
| | Nº1 | Nº2 | Nº3 | Nº4 | Nº5 | Nº6 | | | | |
| Dimensions of Hatchway | 29'9" x 19'11" | 29'9" x 19'11" | 17'11" x 11' | 29'9" x 19'11" | 29'9" x 19'11" | 17'11" x 11' | 4' x 6' | 3'6" x 4'-0" | 4' x 5'-9" | 10'6" x 9'6" wide |
| COAMINGS | Height above Deck | 3'-6" | 3'-8" | 3'-0" | 3'-6" | 3'-6" | 18" | 18" | 18" | 18" |
| | Thickness | 4" | as N°1 | 4" | as N°1 | as N°1 | 4" | 4" | 4" | 4" |
| | Sides | none | as N°1 | none | as N°1 | as N°1 | ✓ | ✓ | ✓ | ✓ |
| | Stiffeners | none | as N°1 | none | as N°1 | as N°1 | ✓ | ✓ | ✓ | ✓ |
| HATCH BEAMS | Number | 6 | 8 | 2 | 5 | 5 | (1 forms steel bulkhead) | | | |
| | Spacing | even | as N°1 | as N°1 | as N°1 | as N°1 | ✓ | ✓ | ✓ | none |
| | Scantling and Sketch | 23"x4" | as N°1 | as N°1 | as N°1 | as N°1 | ✓ | ✓ | ✓ | none |
| | Bearing Surface | 3" | 3" | 3" | 3" | 3" | ✓ | ✓ | ✓ | ✓ |
| FORE AND AFTERS | Number | | | | | | ✓ | ✓ | ✓ | absent |
| | Spacing | | | | | | ✓ | ✓ | ✓ | ✓ |
| | Unsupported Lengths | | | | | | ✓ | ✓ | ✓ | ✓ |
| | Scantling and Sketch | | | | | | ✓ | ✓ | ✓ | ✓ |
| HATCH COVERS | Material | | | | | | ✓ | ✓ | ✓ | ✓ |
| | Thickness | | | | | | ✓ | ✓ | ✓ | ✓ |
| | How fitted | | | | | | ✓ | ✓ | ✓ | ✓ |
| | Bearing Surface | | | | | | ✓ | ✓ | ✓ | ✓ |
| Spacing of Cleats | | | | | | | ✓ | ✓ | ✓ | ✓ |
| Number of Tarpaulins | | | | | | | ✓ | ✓ | ✓ | ✓ |

Particulars of fiddle, funnel and ventilator coamings:—

Fiddle funnel ventilator coamings — efficient construction.
Fiddle gratings closed by strong hinges & steel covers.
Engine Room skylight of steel, strong & constructed. repairs are required to be made in E.R. skylight.

Particulars of Flush Bunker Scuttles:—

none

Particulars of Companionways:—

none

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

Deck Deck: 9" dia. Coamings 12" x 24" high to stow cover space.
Ble. 18" dia. Coamings 36" high x 32 to 4 to boards.
Ble. 12" x 18" dia. Coamings 36" high x 3 to 34 to tween decks.
Poop Deck: 12" dia. 30" high x 3 to tween decks.
vent coamings constructed in accordance with Rule requirements.
wood plugs & canvas covers provided.

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

Under free: 6" high + 9" high to F.P. tank & N°1 & N°2. Screens caps or wood plugs provided. 22" dia.
Aft well: 2" dia. 30" high + 18" high F.N. to B.B. tanks. plugs to be fitted. X
Poop Deck: to A.P. tank. pipe as to ht. of 8" hatch coaming. 30" high. wood plug provided.

Particulars of Gangway Cargo and Coaling Ports:—

none

Particulars of Scuppers and Sanitary Discharge Pipes:—

In wells: Scuppers of gunwale bar type.
On Bridge Deck: pipe scuppers to shell, no valves.
On Deck in Bridge: pipe scuppers to shell, no valves.
Sanitary discharge pipes lead to shell in tween decks, with storm valves.

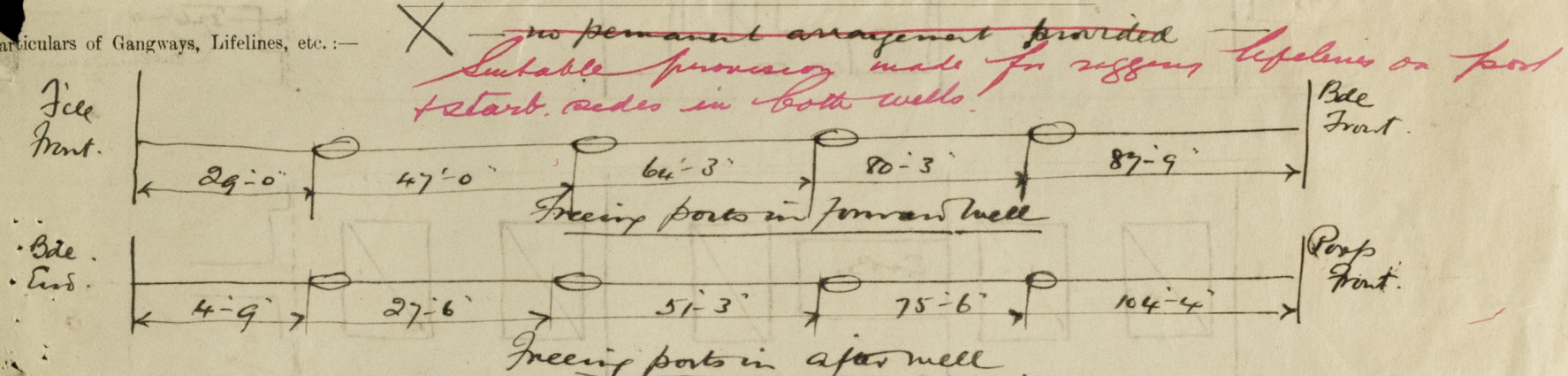
Particulars of Side Scuttles:—

In Ice crew spaces, fitted with deadlights, repairs are required to glasses.
Poop: not fitted with deadlights.
All Side Scuttles substantially constructed.

Particulars of Guard Rails:—

Ice, Bde & Poop Decks: 3'-6" high rails, 3 rods, stanchions spaced 5' apart.
Steel bulwarks in wells 4'-0" high substantially constructed & stayed.

Particulars of Gangways, Lifelines, etc:—



Particulars of Freeing Arrangements.

| | Length of Bulkhead | Height of Bulkhead | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
|-----------|--------------------|--------------------|-----------------------|------------------|----------------|---------------------|
| Fore Well | 104'-4" | 4'-0" | 3'-9" | 4 | 22.50 sq ft | 20.86 sq ft |
| Aft Well | 87'-9" | 4'-0" | as in aft well | 4 | 22.50 sq ft | 17.58 sq ft |

State position of each freeing port: After Well: — } 1/2' above deck edge.
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Horizontal bars.
Additional area where sheer is less than standard.

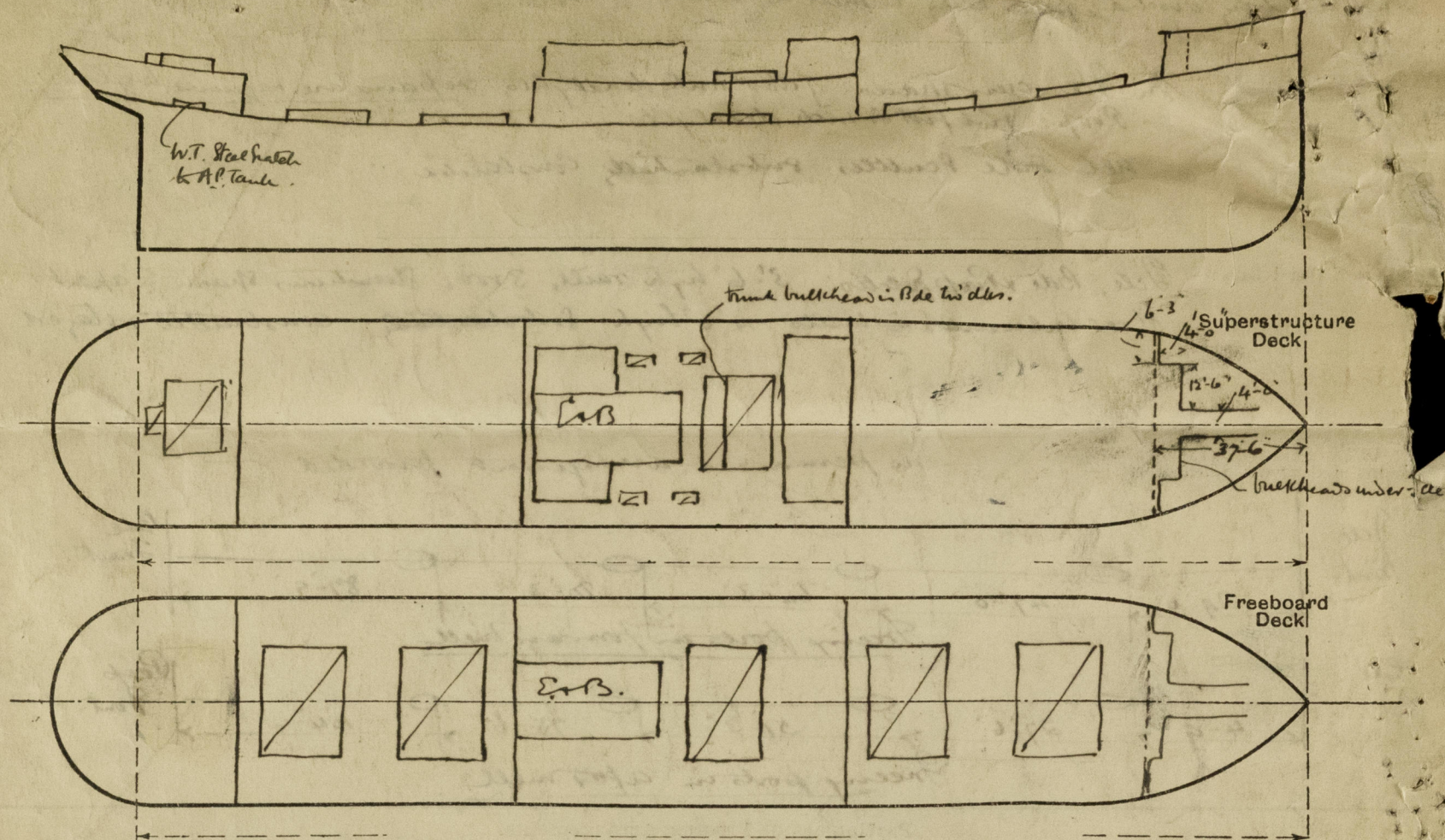
Particulars of Superstructures, Trunks, Casings, Deckhouses.

| | Coaming | Plating | Stiffeners | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
|---|---------|---------|---------------------|-----------|-------------------------------|------------------|-----------------|-------------------|
| Poop Bulkhead | 38 | 38 | 6 x 3" L | 2'-3" | none | 4'-3" x 2' | 24" | 8'-0" |
| Raised Quarter Deck Bulkhead | | | | | | 4'-3" x 5'4" | 24" | 8'-0" |
| Bridge, After Bulkhead | 4 | 38 | not accessible | | | 4'-3" x 2'-0" | 18" | 8'-0" |
| Bridge, Forward Bulkhead | 4 | 38 | 8" B.A. | 30" | Bkts. | 5' x 4' | 24" | 8'-0" |
| Forecastle Bulkhead | 38 | 38 | 3 x 3" x 45" | 30" + 36" | none | 4'-3" x 2' | 18" | 8'-0" |
| Trunk, Aft | | | | | | | | |
| Trunk, Forward | | | | | | | | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | | | | | | | | |
| Exposed Machinery Casings on Superstructure Decks | 38 | 38 | 3 1/2 x 3 1/2 x 43" | 4'-3" | Bkts, Top | 4'-3" x 2'-0" | 20" | 7'-0" |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | 3 | 3 | 3 1/2 x 3 1/2 x 4 | 4'-3" | lipped top | 4'-3" x 2'-0" | 18" | 8'-0" |

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

| | | |
|---|---|-------------------------|
| Poop Bulkhead | Portable steel plates, hook bolts spaced 12" apart. | no. |
| Raised Quarter Deck Bulkhead | Steel hinges doors, spring locks, yes. | repairs req'd to locks. |
| Bridge, After Bulkhead | Stormboards 3" thick, 6" free height in rivet channels. | |
| Bridge, Forward Bulkhead | Hinged steel doors, repairs required to fastenings. | X |
| Forecastle Bulkhead | Hinged steel doors, hook bolts 10" + 12" apart. | no. |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | Hinged steel doors to stow, spring locks, yes. | |
| Exposed Machinery Casings on Superstructure Decks | Hinged steel doors, repairs required to fastenings. | X |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | Hinged steel doors, repairs required to fastenings. | X |
| 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:—

Freeboard Turret, held afloat.
In front of Special Periodic Turret, held
at this time.

Hatch on Prop Deck to store:—
4' x 3'-6" coaming 2'-3" x 1'-4"
wood covers 2'-3", bearing 2'-3"
Cleats spaced 3'-6", battens in edge of deck, paunching
Running hatches U. Bde in 15de.
3'-6" x 2'-6" coaming 1'-8" x 1'-4"
wood covers 2'-3", bearing 2'-3"
Cleats 2'-6", paunch. - battens in edge of 1 top paunch

Builder's name and yard number Bartram & Sons No 215

Names of sister ships

Owners M.S. Polemis.

Fee £ 12 : 15 : —

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