

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Shelter Deck with tonnage opening aft & Forecastle on Shelter Deck*Port of Survey *Newcastle-on-Tyne*

(Type of Superstructures.)

Date of Survey *4th May 1933*

| Ship's Name | Nationality and Port of Registry | Official Number | Gross Tonnage | Date of Build |
|---|----------------------------------|-----------------------|---------------------|---------------|
| <i>AKTI</i> (ex. <i>FANTEE</i>) | <i>Greek</i> <i>Sydra</i> | <i>✓</i> | <i>5663</i> | <i>1920</i> |
| Moulded Dimensions: Length | <i>399.6'</i> | Breadth <i>52.66'</i> | Depth <i>26.92'</i> | |
| Moulded displacement at moulded draught = 85 per cent. of moulded depth | <i>10293</i> tons | | | |
| Coefficient of fineness for use with Tables | <i>.748</i> | | | |

Name of Surveyor *Alex E. Stevenson*Particulars of Classification *+100A1**Shelter dk. with freeboard.*

| Depth for Freeboard (D) | | Depth correction | | Round of Beam correction | |
|---|---------------|---|----------|--|---|
| Moulded depth | <i>26.92'</i> | (a) Where D is greater than Table depth (D-Table depth) R = <i>(26.96-26.64)3 = +.96"</i> | | Moulded Breadth (B) | <i>52.66'</i> |
| Stringer plate | <i>.04</i> | (b) Where D is less than Table depth (if allowed) (Table depth-D) R = | | Standard Round of Beam = $\frac{B \times 12}{50}$ | <i>12.64"</i> |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ | | | | Ship's Round of Beam | <i>12.50"</i> |
| Depth for Freeboard (D) = | <i>26.96</i> | If restricted by superstructures | <i>✓</i> | Difference | <i>.14</i> |
| | | | | Restricted to | |
| | | | | Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$ | <i>= \frac{.14}{4} \times .0062 = N/L</i> |

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|----------------------------|-------------------|----------------------|
| Poop enclosed ... | <i>30.5'</i> | <i>30.50</i> | <i>8'-6" + 2" wood dk.</i> | | <i>30.50</i> |
| " overhang ... | | | | | |
| R.Q.D. enclosed ... | | | | | |
| " overhang ... | | | | | |
| Bridge enclosed ... | <i>362.73'</i> | <i>362.73</i> | <i>8'-6"</i> | | <i>362.73</i> |
| " overhang aft ... | | | | | |
| " overhang forward ... | | | | | |
| Fore enclosed ... | <i>1.87'</i> | <i>1.40</i> | | | <i>1.40</i> |
| " overhang ... | | | | | |
| Trunk aft ... | <i>4.5'</i> | <i>2.48</i> | <i>8'-6"</i> | | <i>2.48</i> |
| " forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| " forward ... | | | | | |
| Total ... | <i>399.60</i> | <i>397.11</i> | | | <i>397.11</i> |

Standard Height of Superstructure *7.50*R.Q.D. *✓*Deduction for complete superstructure *41.97*Percentage covered $\frac{S}{L} = 100\%$ $\frac{S_1}{L} = 99.38\%$ $\frac{E}{L} = 99.38\%$ Percentage from Table, Line A. *99.24%*
(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 = *41.97 x .9924 = -41.65"*

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|-------------------------------|-------------------|----------|---|---------------|-----------------|--------------------|----------|---|---------------|
| A.P. ... | <i>49.96</i> | <i>1</i> | | <i>49.96</i> | <i>55</i> | <i>67.00</i> | <i>1</i> | | <i>67.00</i> |
| $\frac{1}{2}$ L from A.P. ... | <i>22.23</i> | <i>4</i> | | <i>88.92</i> | <i>25.08</i> | <i>29.81</i> | <i>4</i> | | <i>119.24</i> |
| $\frac{2}{3}$ L " ... | <i>5.49</i> | <i>2</i> | | <i>10.98</i> | <i>6.27</i> | <i>7.37</i> | <i>2</i> | | <i>14.74</i> |
| Amidships ... | | <i>4</i> | | | | | <i>4</i> | | |
| $\frac{2}{3}$ L from F.P. ... | <i>10.99</i> | <i>2</i> | | <i>21.98</i> | <i>11.95</i> | <i>13.20</i> | <i>2</i> | | <i>26.40</i> |
| $\frac{1}{2}$ L " ... | <i>44.46</i> | <i>4</i> | | <i>177.84</i> | <i>47.30</i> | <i>53.41</i> | <i>4</i> | | <i>213.64</i> |
| F.P. ... | <i>99.92</i> | <i>1</i> | | <i>99.92</i> | <i>108</i> | <i>120.00</i> | <i>1</i> | | <i>120.00</i> |
| Total ... | | | | <i>449.60</i> | | | | | <i>561.02</i> |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{111.42}{18} \times .25 = -1.55"$

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 = *26.96*Summer freeboard = *2.723*Moulded draught (d) = *24.243*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *6.06" = 152*Addition for Winter North Atlantic Freeboard (if required) = *✓*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$

Tons per inch immersion at summer load water line

T =

Deduction = $\frac{\Delta}{40T}$ inches= *6" = 152*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

*71.38**74.94**87.8**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33**5.5-33*

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 | | | | | | | | | |
|---|-------------------------|--------------------------------------|--|----------------|-------------------------|-------------------|------------------|---|---|
| 2 - on Shell dk - - - - - on Freebd dk - - - - - | | | | | | | | | |
| Description of Hatchway | N ^o 1, 2 & 4 | N ^o 2A | N ^o 3 | T.O. | N ^o 1, 2 & 4 | N ^o 2A | N ^o 3 | Store H. on Freebd dk | 1-9-2-6 |
| Dimensions of Hatchway | 29'9" x 20'0" | 12'9" x 18'0" | 34'0" x 20'0" | 4'6" x 20'0" | 29'9" x 20'0" | 12'9" x 18'0" | 34'0" x 20'0" | coam 12" x 38" | with steel plate cover, secured by 5 lugs |
| COAMINGS | Height above Deck | 30" | 30" | 30" | 9 1/2" | 10" | 10" | Store H. on Shell dk in Fld. | 4'0" x 2'7", coam 9" x 3 1/2" BA |
| | Thickness | 4 1/2" | 4 1/2" | 5 1/2" | 9 1/2" x 3 1/2" BA | 10" x 3 1/2" BA | 10" x 3 1/2" BA | H 2 1/2", BS 2", d 13" | one tarpaulin |
| | Sides | 4 1/2" | 4 1/2" | 4 1/2" | — | — | — | — | — |
| | Stiffeners | 7 x 3 BA | 7 x 3 BA | 7 x 3 BA | — | — | — | — | — |
| | Brackets, Stays | — | — | — | — | — | — | — | — |
| HATCH BEAMS | Number | 5 | 2 | 6 | none | 5 | 2 | Store H. on Freebd dk forward | 4'0" x 2'6", coam 3 1/2" x 3 1/2" L |
| | Spacing | 4'11 1/2" | 4'3" | 4'10 1/2" | — | 4'11 1/2" | 4'3" | no hold, BS 3", no deals, no tarpaulins | — |
| | Scantling and Sketch | 18 1/2" x 36" | 16 1/2" x 34" | 18 1/2" x 36" | — | 18 1/2" x 36" | 16 1/2" x 34" | Store H. on Saloon House on Shell dk | 3'0" x 3'0", coam 3 1/2" x 3 1/2" L |
| | 11" plate | 4 x 3 x 4 1/2" | 4 x 3 x 4 1/2" | 4 x 3 x 4 1/2" | — | 4 x 3 x 4 1/2" | 4 x 3 x 4 1/2" | H 2" gratings, BS 3", no deals, protected by steel house with | Hinged wood 4 wheel doors 20" x 11" |
| | 11" angles | 4 x 3 x 4 1/2" | 4 x 3 x 4 1/2" | 4 x 3 x 4 1/2" | — | 4 x 3 x 4 1/2" | 4 x 3 x 4 1/2" | Trimming Hatch on Freebd dk | 16' off 2'6" x 2'6", coam 9", B.P. |
| FORE AND AFTERS | Bearing Surface | 3 1/2" | 3 1/2" | 3 1/2" | — | 3 1/2" | 3 1/2" | H 3", BS 2 1/2", d 13" | one tarpaulin |
| | Number | none | none | none | — | — | — | — | — |
| | Spacing | — | — | — | — | — | — | — | — |
| | Unsupported Lengths | Bunker H on Coaming Top | 4'6" x 16'6", coam 5 1/2" x 3 1/2" L, H 2 1/2", BS 3", d 2 1/2", 2 tarpaulins | — | — | — | — | — | — |
| | Scantling and Sketch | Bunker H on Freebd dk | 2' off 4'0" x 5'5", coam 9 1/2" x 3 1/2" BA, 2' off 6'5" x 2'6", coam 9 1/2" x 3 1/2" BA | — | — | — | — | — | — |
| HATCH COVERS | Bearing Surface | 4 1/2" off 2'6" x 2'6" coam 9", B.P. | H 2 1/2", BS 2 1/2", d 15/16", one tarpaulin | — | — | — | — | — | — |
| | Material | wp | wp | wp | — | wp | wp | — | — |
| | Thickness | 2 1/2" x 5" | 2 1/2" x 2" | 3" | — | 2 1/2" x 5" | 2 1/2" x 5" | — | — |
| | How fitted | fta | fta | fta | — | fta | fta | — | — |
| | Bearing Surface | 4'4 1/2" | 4'4 1/2" | 4'4 1/2" | — | 4'4 1/2" | 4'4 1/2" | — | — |
| Spacing of Cleats | 24" | 23" | 24" | — | 24" | 23" | 24" | — | — |
| Number of Tarpaulins | 2 | 2 | 2 | — | 2 | 2 | 2 | — | — |
| *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 :-

Fidley gratings protected by hinged steel covers.
 Funnel & fidley ventilator in efficient condition.
 Engine skylight of steel, strongly constructed.

Particulars of Flush Bunker Scuttles :-

none

Particulars of Companionways :-

Entrance to crew space in shell T. dk. aft from steel house on shell dk, having hinged steel doors 4'6" x 2'0", sills 18", securing appliances ~~in~~ in order.
 Tunnel Escape entrance in shell T. dk. aft, with hinged (18") wood door, 5'0" x 1'5", sill 12" above freebd dk door closed both sides.

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

on Fld dk 2 off 18" dia. coam 30" x 38" led to hold
 on shell dk 16 " 18 " 36" x 38 " "

Ventilators constructed in accordance with rules.

~~the~~ closing appliances produced wood plugs

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

on Fld dk 1 clean 3" dia. x 17" h opening from fore peak
 " 1 " 2 1/2" x 14 " " " double bottom
 " shell dk 4 " 2 " x 17 " " " " aft peak
 " 1 " 3 " x 15 " " " " "

~~the~~ closing appliances. wood plugs

Particulars of Gangway Cargo and Coaling Ports :-

none

Particulars of Scuppers and Sanitary Discharge Pipes :-

From Shell T. dk 1 scupper Pts in Tonnage well, & 5 Pts forward of Tonnage well, discharging through ship's side below freeboard deck, with brass stem valve

Particulars of Side Scuttles :-

in shell T. dk aft with hinged dead lights

Particulars of Guard Rails :-

on shell dk Steel bulwarks 3'6" high, efficiently constructed & supported, in way of Saloon House & from aft end of No 4 hatch to stern.
 Remainder guard rails 3'5" high, having 3 rds & standards 4'0" apart

Particulars of Gangways, Lifelines, etc. :-

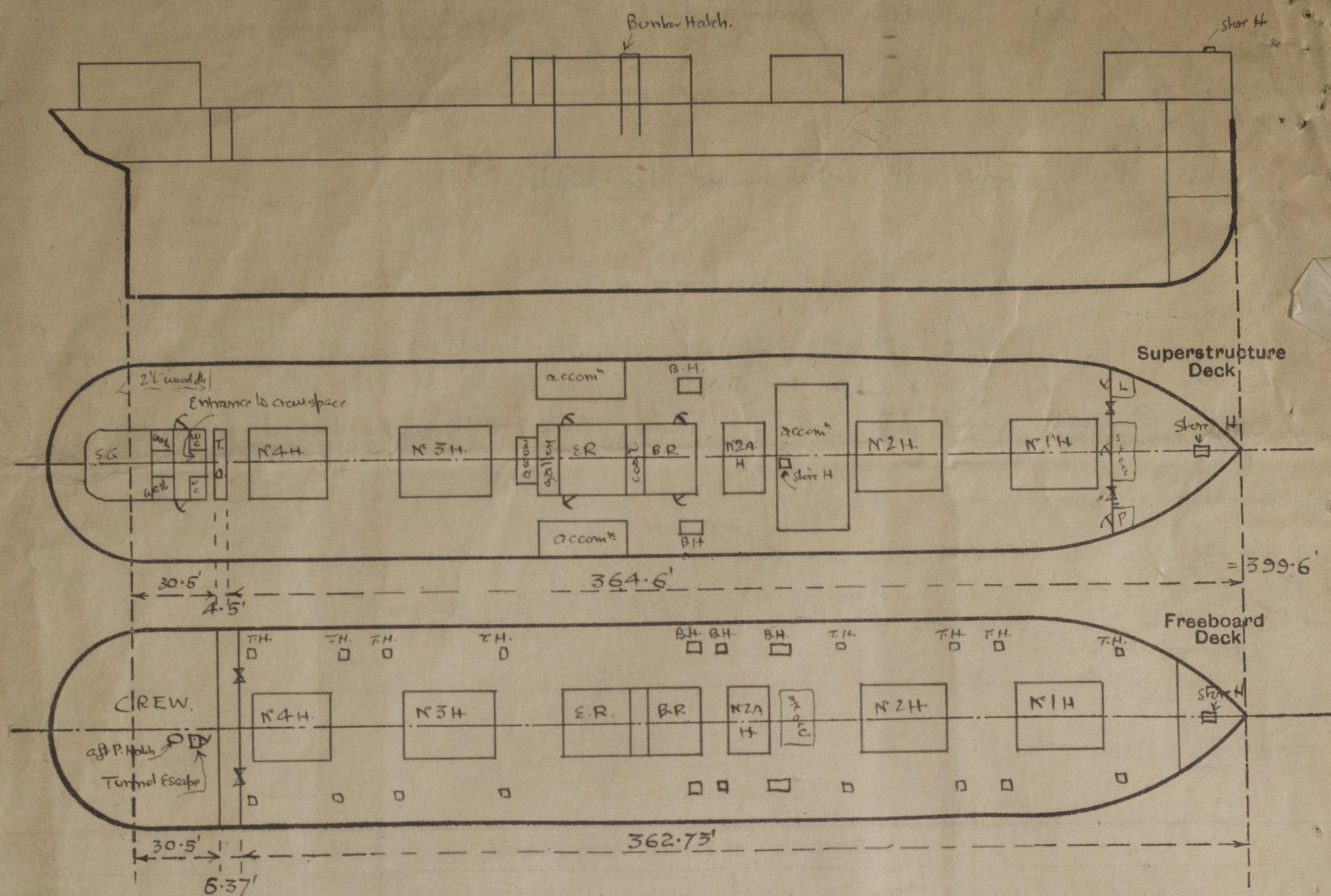
none

| Particulars of Freeing Arrangements. | | | | | | |
|--|-------------------|-------------------|-----------------------|------------------|----------------|---------------------|
| | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
| Tonnage After Well | 6'4 1/2" | 8'6" | 18" x 18" | 1 | 2.25 sq. ft. | |
| Forward Well | | | | | | |
| State position of each freeing port ... (F. and A. position and height above deck edge) { After Well :- 2'7" from forward bulwark 12" above deck Forward Well :- State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :- Hinged steel shutters. 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" | 5'3" x 36" | 24" | — | none | — | 8'6" |
| Raised Quarter Deck Bulkhead | — | — | — | — | — | — | — | — |
| Bridge, After Bulkhead | — | 26" | 52" flange | 30" | — | 4'0" x 3'0" (2) | 17" | 8'6" |
| Bridge, Forward Bulkhead | — | — | — | — | — | — | — | — |
| Forecastle Bulkhead | — | — | — | — | — | — | — | — |
| Trunk, Aft | — | — | — | — | — | — | — | — |
| Trunk, Forward | — | — | — | — | — | — | — | — |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | 36" | 30" | 4'3" x 40" 3 1/2" x 34" L | 40" | Bids at top | 4'6" x 2'0" (4) | 19" | 7'6" |
| Exposed Machinery Casings on Superstructure Decks | — | — | — | — | — | — | — | — |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | 40" | 30" | 5" flange | 51" | — | none | — | 8'6" |
| Deckhouses on Flush Deck Ships | — | — | — | — | — | — | — | — |

| Particulars of Closing Appliances (state if capable of being manipulated from both sides). | |
|--|--|
| Poop Bulkhead | <input checked="" type="checkbox"/> no openings |
| Raised Quarter Deck Bulkhead | |
| Bridge, After Bulkhead | |
| Bridge, Forward Bulkhead | 2 1/2" weather boards in full height ricket channels |
| Forecastle Bulkhead | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | |
| Exposed Machinery Casings on Superstructure Decks | Hinged steel doors. Secured both sides |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | <input checked="" type="checkbox"/> |
| 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:—

Timber assignment not required.

Vessel surveyed afloat, whilst undergoing Special Survey No 3, which is expected to be finished next week.

A Tonnage opening has now been fitted aft (particulars on this report). The scuppers from Shellier T. dies to bulges have been blanked off at freeboard deck & new scuppers fitted (with brass storm valve) discharging through ship's side below freeboard deck.

Builder's name and yard number Northumberland S. B. Co. Ltd.

Names of sister ships F. 1. type standard ship.

Owners Rethymis & Kulukundis Ltd.

Fee £ 13 - 12 - 0.

Received by me



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