

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

23 APR 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having *Shellin deck with trunnice opening aft.*Port of Survey *Newcastle*

(Type of Superstructures.)

Date of Survey *20.21 April 32*

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

*"ALNWICK"**British
Newcastle**149463**1406**1928-4*Name of Surveyor *F. Webb*Moulded Dimensions: Length *253.58'* Breadth *38.58'* Depth *16.67'* to *2nd deck*.
Moulded displacement at moulded draught = 85 per cent. of moulded depth *2451.6 tons @ 14'-2"*
Coefficient of fineness for use with Tables *.618.*Particulars of Classification *+100 A1
with freeboard*

Depth for Freeboard (D)

Moulded depth ... *16.67'*
Stringer Plate ... *.03*
Sheathing on exposed deck
 $T \left(\frac{L-D}{L} \right) =$
Depth for Freeboard (D) = *16.70'*

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R =
(b) Where D is less than Table depth (if allowed)
(Table depth-D) R =
(16.90-16.70) 1.951 = -.39"
If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) *38.58'*
Standard Round of Beam = $\frac{B \times 12}{50} =$ *9.26"*
Ship's Round of Beam = *8 3/4"*
Difference *.51"*
Restricted to *✓*
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ *51 x .0082 = .4182"*

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|------------------|-------------------|----------------------|
| Poop enclosed ... | <i>22.33</i> | <i>22-4"</i> | <i>7-4"</i> | | <i>22.33</i> |
| " overhang ... | | | | | |
| R.Q.D. enclosed ... | | | | | |
| " overhang ... | | | | | |
| Bridge enclosed ... | | | | | |
| " overhang at ... | <i>227.08</i> | <i>227-1"</i> | <i>6-10 1/2"</i> | <i>amidships</i> | <i>227.08</i> |
| " overhang forward ... | | | <i>6"</i> | | |
| Fore enclosed ... | | | <i>7-4 1/2"</i> | <i>amidships</i> | |
| " overhang ... | | | | | |
| Trunk aft ... | | | | | |
| " forward ... | | | | | |
| Tonnage opening aft ... | <i>1.17</i> | <i>2.08</i> | | | <i>2.08</i> |
| " " forward ... | | <i>251.49</i> | | | |
| Total ... | <i>253.58</i> | <i>253.58</i> | | | <i>251.49</i> |

Standard Height of Superstructure *6.036'*
" " R.Q.D. *✓*
Deduction for complete superstructure *31.36'*
Percentage covered $\frac{S}{L} =$ *100%*
" $\frac{S_1}{L} =$ *99.18%*
" $\frac{E}{L} =$ *99.18%*
Percentage from Table, Line A. *99.99%*
(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 = *31.36 x .9899 = -31.04"*SEE SKETCH
MAIN DECK

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|---------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|---------------|
| P. ... | <i>35.36</i> | 1 | | <i>35.36</i> | <i>72.200</i> | <i>30.07</i> | 1 | | <i>30.07</i> |
| from A.P. ... | <i>15.73</i> | 4 | | <i>62.92</i> | <i>34.562</i> | <i>13.38</i> | 4 | | <i>53.52</i> |
| " ... | <i>3.89</i> | 2 | | <i>7.78</i> | <i>7.78</i> | <i>3.31</i> | 2 | | <i>6.62</i> |
| ships ... | | 4 | | | <i>✓ nil</i> | <i>✓</i> | 4 | | <i>✓</i> |
| from F.P. ... | <i>7.78</i> | 2 | | <i>15.56</i> | <i>23.557</i> | <i>5.62</i> | 2 | | <i>11.24</i> |
| " ... | <i>31.47</i> | 4 | | <i>125.88</i> | <i>164.192</i> | <i>22.73</i> | 4 | | <i>90.92</i> |
| " ... | <i>70.72</i> | 1 | | <i>70.72</i> | <i>35.4</i> | <i>51.07</i> | 1 | | <i>51.07</i> |
| Total ... | | | | <i>318.22</i> | | | | | <i>243.44</i> |

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ *74.78 / 18 x .25 = +1.04"*If limited on account of midship superstructure. *✓*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 = *16.70'*
Summer freeboard = *.23*
Moulded draught (d) = *16.47'*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *4.12" = 4"*Addition for Winter North Atlantic Freeboard (if required) = *2"*

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
= *4" 1906*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient *nil.*Depth Correction ... *39"*
Deduction for superstructures ... *31.04"*
Sheer correction ... *1.04"*
Round of Beam correction ...
Correction for Thickness of Deck amidships ...
Other corrections, scantlings, etc. ...Summer Freeboard = *2.66'*

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

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Tropical Fresh Water Line above Centre of Disc ... *4 3/4"*
Fresh Water Line " " ... *4"*
Tropical Line " " ... *3 3/4"*
Winter Line below " " ... *4"*
Winter North Atlantic Line " " ... *6"*Tropical Fresh Water Freeboard ... *0'-2 3/4"*
Fresh Water " " ... *0'-2"*
Tropical " " ... *0'-1 3/4"*
Winter " " ... *0'-6 3/4"*
Winter North Atlantic " " ... *0'-8 3/4"*

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| STATIONERY ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | |
|--|-----------------------|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----------------|--------|
| SHELTER DECK UPPER DECK | | | | | | | | | |
| Description of Hatchway | No. 1. | No. 2 | No. 3. | No. 1. | No. 2. | No. 3. | Tonnage Opening | Dolly Top Hatch | |
| Dimensions of Hatchway | 18'-9" x 14' | 27'-1" x 16' | 27'-1" 16' | 18'-9" x 14' | 28'-4" x 16' | 27' x 16' | 16 x 4-8 | 9-6 x 4-2 | |
| COAMINGS { | Height above Deck ... | 24" | 24" | 18"-6" | 24"-6" | 24"-6" | 14" | 8-8" | |
| | Thickness { Sides ... | .44" | .44" | .44" | .44" | .44" | .44" | .44" | |
| | Stiffeners ... | 7-3-8/20 | 7-3-8/20 | 7-3-8/20 | ✓ | ✓ | ✓ | ✓ | |
| | Brackets, Stays ... | one 2" dia | two 2" | | | | | | |
| HATCH BEAMS { | Number | 3. | 4 | 4 | 3 | 5. | 4 | . | |
| | Spacing | 4-8" | 5-5" | 5-5" | 4-8" | 5-6 1/2" | 5-5" | . | |
| | Scantling and Sketch | 3.3.40' Double Top Batten Steel Plate 11.30.1 | 2 1/2. 3. 41' | 3 1/2. 3. 41' | 3. 3. 40' | 3 1/2. 3. 41' | 3 1/2. 3. 41' | ✓ | ✓ |
| | Bearing Surface ... | 7. 2 1/2. 45" 3 1/2" | 7. 3 1/2. 51" 3 1/2" | 7. 2 1/2. 51" 3 1/2" | 7. 3 1/2. 45" 3 1/2" | 7. 3 1/2. 51" 3 1/2" | 7. 3 1/2. 51" 3 1/2" | | |
| FORE AND AFTERS { | Number | | | | | | | | |
| | Spacing | | | | | | | | |
| | Unsupported Lengths | | | | | | | | |
| | Scantling* and Sketch | | | none | | | | | |
| | Bearing Surface ... | | | | | | | | |
| HATCH COVERS { | Material | 2 1/2' | 2 1/2' | 2 1/2' | 2 1/2' | 2 1/2' | 2 1/2' | 2 1/2' | 2 1/2' |
| | Thickness ... | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. | W.P. |
| | How fitted ... | 70A | 70A | 70A | 70A | 70A | 70A | 70A | 70A |
| | Bearing Surface ... | 3, | 3-1 | 3-1 | 3, | 3, | 3, | 3, | 3, |
| Spacing of Cleats | 19-23' | 20-24' | 20-23' | 24' | 23-25' | 22-25' | ✓ | 2-8" | |
| Number of Tarpaulins | 2, | 2, | 2, | 2, | 2, | 2, | | 2, | |

*Are wood fore and afters steel shod at all bearing surfaces? ✓
 Are battens and wedges efficient and in good condition? Yes.
 Are tarpaulins in good condition and in accordance with rule requirements? Yes.
 Are lashings provided in accordance with rule requirements? Yes. Lashing has failed.

Particulars of fiddley, funnel and ventilator coamings :—

Fedley gratings covered by strong steel hinged caps.
 Tunnel & ventilator in excellent condition.
 Engine Room skylights & steel of strong construction.

Particulars of Flush Bunker Scuttles:—

3 on upper deck of strong construction 22" dia
3/4" thick cover each run with $\frac{1}{2}$ " stuffing mat.
Bayonet socket fastening.

Particulars of Companionways :—

One Companion under Forecastle of Steel 30', stimpined with 2 1/2" round iron and 3 x 2 1/2 x 1/2" angles. Door 1 1/2" solid teak 5'-10" x 2'-0". Set 12" above deck operated both sides.

Stairway Companionway one
30 Stal felled on Chiller
back aft of Side House
3-6 x 2-7" Munged stal
door. 18" Sill.
Oslo rpt 8 No 4711.

Companion house above Sh. Stk (Entrance to 2nd class across
in strong steel back house. Plating 5/16. Clippers 3x22x20. @ 2-4'
door P.S. 1/4 Tack. 5-3x2-0. Sides 1/4" 4 lights no dead lights.

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

On fore well three 12" dia x 36" x 26" + one 30" high in house.
On after well one 8" - x 38" x 26" To Accur.
" 12" - 30" x " to Hold

ventilator in accordance with Rule.
Wood plug, & cover ~~stitch~~ ~~down~~ ~~on~~ ~~head~~
provided for all vents ~~but not seen~~

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

| | | | | | | |
|--------------|-------------|-----------|----------|-----|--------|---------------|
| In fore well | 3. @ 2 1/2" | due '19 | to mouth | 26" | to top | to CDB. |
| In aft well | 3. @ 2 1/2" | - '18 1/2 | - | 24 | - | CDB. P.S. |
| On aft deck | 1 @ 2 1/2" | - '18. | - | 24. | - | to aft Peak |
| - | 1 @ 2 1/2" | - '18. | - | 24 | - | to aft Track. |

On Feb deck 1 @ 2 1/2" dia 18 1/2" barrel 22" to top.
some through studs with 2 1/2" dia just below. 8 1/2" to top
or 1 do. some slugs at ships side.
found COB. 2 1/2" x 1 1/2" x 22".

~~The slugs are covered in powder~~

Particulars of Gangway Cargo and Coaling Ports:—

One Cooling fan P&S in shelter between decks 5'-6"x3'-5" in tubes. 8" tall above
steel deck. 50 thick stiffens all round edge with 5x1" flats. Secured by 1" top
bolts & laggles 18-24" apart all round edge across division. Shell divided
in way.

One ships side hunged door about 12x5" in shelter under deck just off
Cargo door enclosed in built W.T. steel hopper or ships side ^{several} hunged
top with toggles all round. Ships side opening opened by lever inside hopper or W.T.
one ordinary tubular act shoot from fidley through ships side
led from inside fidley.
one fallay refuse shoot from shelter deck fallay, or shelter deck!

Discharges overboard as indicated on diagram
fitted with Press. Storm Valves,

Particulars of Scurpers and Sanitary Discharge Pipes —

Particulate of:

- 4" W.C. discharge P&S, filled with S.V. ✓
- 5" Suction from Shining G. flat Port. filled with S.V. ✓
- 2" Banley Port filled with S.V. ✓
- 4" Screw down - new return Valve P&S from Tonnage opening ✓
- 1 1/2" Galvin discharge Stn. filled with S.V. ✓
- 4" W.C. discharge Stn. filled with S.V. ✓

Particulate of Side Scintles: S.V. ✓

Particulars of Side Scuttles: Side lights on Deck (cross quarters) 0 to 2nd class Accommodation on main deck aft all fitted with hinged deadlights.
No deadlights fitted to side lights of Accommodation on Shelter deck.

Particulars of Guard Rails

Back on all deck 3'-6" high. 4'-6" spacing of Stanchions. 21" to bottom rail of the 2
bulwarks full length of Bridge & across under. 3'-9" high stays 4-1 apart of 5x3x⁵/₁₆"
(then all ladderway, etc.).
Fitted by Boat deck sheds run down.

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 |
| After Well | 76-6 (as trimmings) | 3-9. | 2'-6" x 1'-9" | Two. | 8 3/4 sq. ft. | 7 1/2 sq. ft. |
| Forward Well | 73-2 | 3-11 | 2-6 x 1'-9." | Two. | 8 3/4 sq. ft. | 7 1/2 sq. ft. |

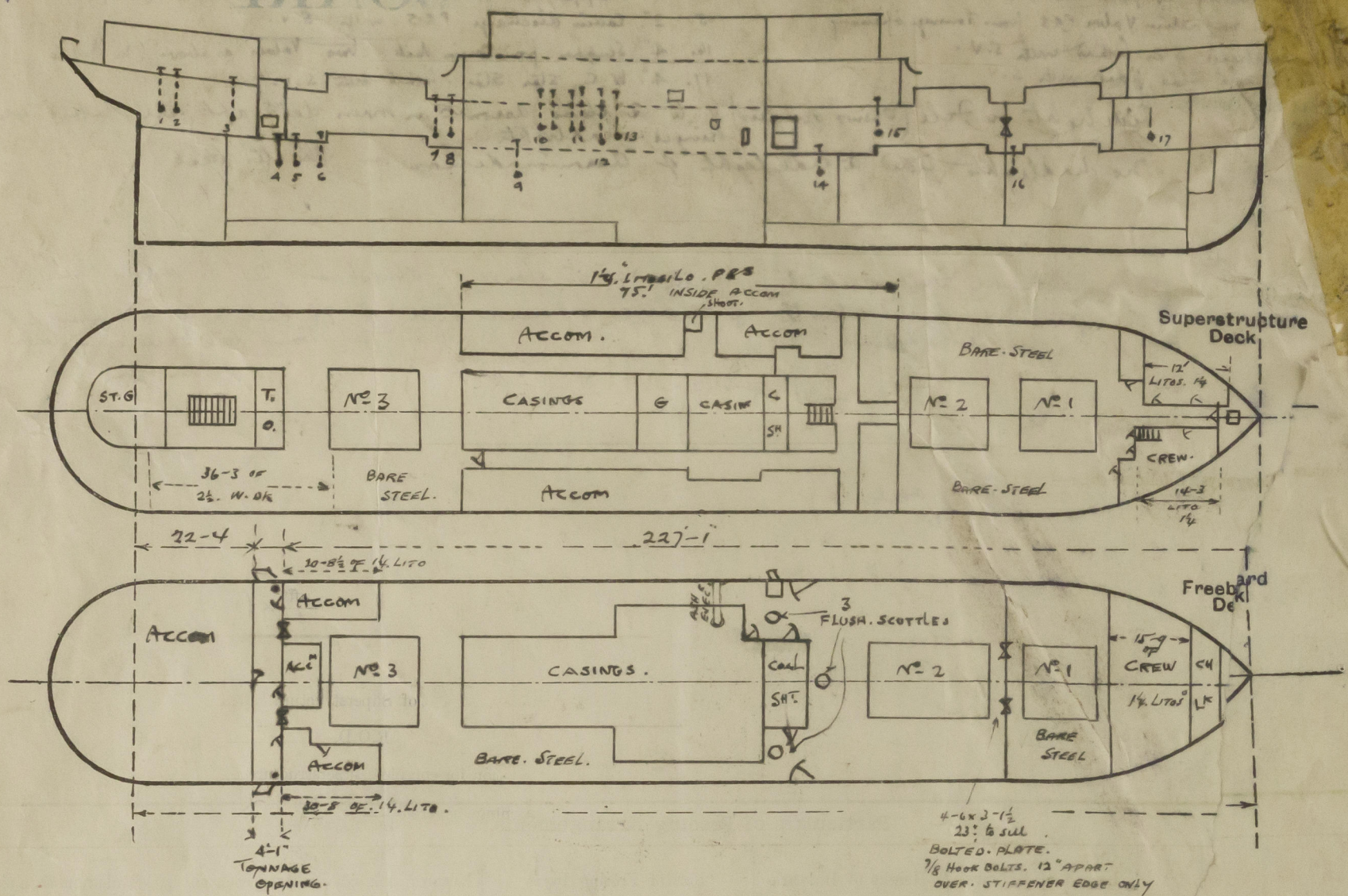
State position of such freeboards (P. and A. position and height above deck) and whether the freeing ports are fitted with gratings, bars, or rails, and give particulars of such: { After Well: From Bridge deck down end 5-7 + 35-3 } Hinged flat doors + 1-horiz. rail
 State whether the freeing ports are fitted with gratings, bars, or rails, and give particulars of such: { 2nd. 5-4 1/2 + 41-1. }
 One work flat P&S in tankage well 19 1/2 x 19 1/2. cell 15" hinged + secured by strong bolt

| 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 <i>in Tonnage wall</i> | 20 | 20 | 1/2" 3. 20 | 5-6 | none | 5-8 1/2 x 2-0 | 7 1/2 | ✓ |
| Raised Quarter Deck Bulkhead | | | | | | | | |
| Bridge, After Bulkhead <i>in Tonnage wall</i> | 20 | 20 | 1/2" 3. 20 | 3-0 | none | 2 @ 5-0 x 3-1 1 @ 5-9 x 2-0 | 12 7 1/2 | |
| Bridge, Forward Bulkhead | | | | | | | | |
| Forecastle Bulkhead | | | | | | | | |
| Trunk, Aft | | | | | | | | |
| Trunk, Forward | | | | | | | | |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks | | | | | | | | |
| Exposed Machinery Casings on Super-structure Decks | | | | | | | | |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | E 30. B. 30 | 30 | 4. 3. 32 3 1/2. 3. 25 | 50" 39" | none | 5-3 x 2-0 2 @ 5-3 x 3-5 x 8. 12" 1 @ 5-2 x 1-9 1/2 ft. 13" | 12 1/2 | 7-4 1/2 to 16 6-10 1/2 to 16 ft. 16 ft. 16 ft. |
| 1. Houses on Flush Deck Ships | | | | | | | | |

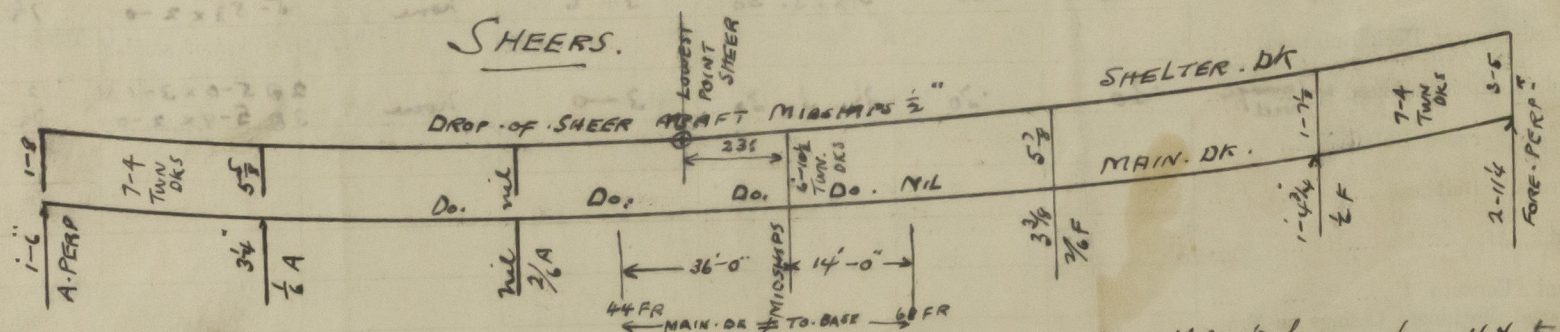
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

| | |
|--|---|
| Poop Bulkhead | 1 wood door ^{1 1/2" thick} 1 1/2" thick hinged operated both sides ✓ |
| Raised Quarter Deck Bulkhead | |
| Bridge, After Bulkhead ^{in Tonnage} | 3 W.P. doors ^{4 solid construction} 1 1/2" thick operated both sides. 2 tonnage openings 3" W.P. weather board full fit in R.R. channels. |
| Bridge, Forward Bulkhead | |
| Forecastle Bulkhead | |
| Exposed Machinery Casings on Freeboard or Raised Quarter Decks | |
| Exposed Machinery Casings on Superstructure Decks | |
| Machinery Casings within Class Superstructures not fitted with Class I Closing Appliances | |
| Deckhouses on Flush Deck Ships | Strong steel hinged doors operated both sides: those with X Plier in main ah operated one side. ✓ |

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:—



Tons per 1' @ 15' = 17.51; 14' = 17.24; 13' = 16.97 tons. Main deck a parallel to base from 44 to 68 ft. Sheers are measured on dk at stbd above depth 2nd at midship.

Builder's name and yard number Swan Hunter & Co. Richardson Ld.

Names of sister ships ✓

Owners Tyne-Tees Shipping Co.

Fee £ 8 : 10 : 0.

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