

Rpt. C.11.

GALLON
FINE MOUTH 24995
HARDEN 24695

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CARDIFF.

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49,654

-6 MAY 1932

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Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having *Raised Quarter Deck, Bridge Forecastle*

Port of Survey *Cardiff.*

Date of Survey *April 28th + May 4th 1932*

Name of Surveyor *W. E. Marlborough*

Particulars of Classification *+ 100 A.1.*

Ship's Name *"AKENSIDE"*
Nationality and Port of Registry *BRITISH NEWCASTLE*
Official Number *140680*
Gross Tonnage *2683*
Date of Build *1914 4 mths.*
Moulded Dimensions: Length *321.00* Breadth *43.00* Depth *21.45*
Moulded displacement at moulded draught = 85 per cent. of moulded depth *5580* tons
Coefficient of fineness for use with Tables *.765*

Depth for Freeboard (D)
Moulded depth ... *21.45*
Stringer plate (.52) ... *.64*
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = *21.49*

Depth correction
(a) Where D is greater than Table depth
(D - Table depth) R =
 $(21.80 - 21.40) \times 2.469 = 41.99$
(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) *43.00*
Standard Round of Beam = $\frac{B \times 12}{50} = 10.32$
Ship's Round of Beam = *10.34*
Difference *excess .43*
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.43}{4} \times 1.310 = 6.03$

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|-------------|-------------------|----------------------|
| Poop enclosed ... | | | | | |
| " overhang ... | | | | | |
| R.Q.D. enclosed | <i>122.58</i> | <i>122.58</i> | <i>4.25</i> | <i>4.25</i> | <i>105.30</i> |
| " overhang | | | | | |
| Bridge enclosed... | <i>63.00</i> | <i>63.00</i> | <i>4.50</i> | | <i>63.00</i> |
| " overhang aft ... | <i>5.4</i> | | <i>4.75</i> | | |
| " overhang forward | <i>25.4</i> | | | | |
| " enclosed ... | <i>32.00</i> | <i>32.00</i> | <i>4.50</i> | | <i>32.00</i> |
| " overhang ... | | | | | |
| Trunk aft ... | | | | | |
| " forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| " forward | | | | | |
| Total ... | <i>217.83</i> | <i>217.91</i> | | | <i>200.43</i> |

Standard Height of Superstructure *6.71*
" " R.Q.D. *4.95*
Deduction for complete superstructure *36.43*
Percentage covered $\frac{S}{L} = 67.86$
" " $\frac{S_1}{L} = 67.82$
" " $\frac{E}{L} = 62.44$
Percentage from Table, Line A. *50.15*
(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 = $.5015 \times 36.43 = 18.42$

SHEER CORRECTION.

| Station | Standard Ordinate | S | M | Product | Actual Ordinate | Effective Ordinate | S | M | Product |
|---------------------|-------------------|---|---|---------------|-----------------|--------------------|---|---|---------------|
| A.P. ... | <i>42.10</i> | 1 | | <i>42.10</i> | <i>30.00</i> | <i>30.00</i> | 1 | | <i>30.00</i> |
| 1/4 L from A.P. ... | <i>18.74</i> | 4 | | <i>74.96</i> | <i>13.23</i> | <i>13.23</i> | 4 | | <i>52.92</i> |
| 1/2 L " ... | <i>4.63</i> | 2 | | <i>9.26</i> | <i>3.29</i> | <i>3.29</i> | 2 | | <i>6.58</i> |
| Amidships ... | | 4 | | | | | 4 | | |
| 3/4 L from F.P. ... | <i>9.26</i> | 2 | | <i>18.52</i> | <i>9.45</i> | <i>9.45</i> | 2 | | <i>18.84</i> |
| 3/4 L " ... | <i>37.48</i> | 4 | | <i>149.92</i> | <i>37.85</i> | <i>37.85</i> | 4 | | <i>151.40</i> |
| F.P. ... | <i>84.20</i> | 1 | | <i>84.20</i> | <i>86.54</i> | <i>86.54</i> | 1 | | <i>86.54</i> |
| Total ... | | | | <i>378.96</i> | | | | | <i>346.28</i> |

Mean actual sheer aft = *.709*
Mean standard sheer aft

SHEER AFT
STAND. *42.10* *30.00*
ACTUAL. *56.22* *37.69*
13.09 *9.87*
112.21 *79.56 = 70.9% OF STAND.*

Mean actual sheer forward = *EXCESS*
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = $\frac{25.4}{321} = .078$
" " aft of " = $\frac{34.92}{321} = .118$

ACTUAL: *87.00*
STAND. = *84.20*
DIFF. = *2.80*
 $\frac{2.80}{321} = .0087$
ALLOWED: *86.54*
SHEER FORWD. *37.92* *9.45*
37.48 *9.26*
.44 *.19* } ADD.
.37 *.16*
37.85 *9.42*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{32.68}{18} \left(.75 - \frac{3393}{4107} \right) = 4.75$
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 = *26.05*
Summer freeboard = *4.17*
Moulded draught (d) = *18.88*

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = *4.72*
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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.765 + .68}{1.36} = \frac{1.445}{1.36}$

| | + | - |
|--|--------------|--------------|
| Depth Correction ... | <i>.99</i> | |
| Deduction for superstructures ... | | <i>18.42</i> |
| Sheer correction ... | <i>.45</i> | |
| Round of Beam correction ... | | <i>.03</i> |
| Correction for Thickness of Deck amidships ... | <i>51.00</i> | |
| Other corrections, scantlings, etc. ... | | |
| | <i>52.44</i> | <i>18.45</i> |
| Summer Freeboard = | <i>86.00</i> | |

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *Raised Quarter* Deck:— *4'-2"*

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

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W467-0214(1/2) 1906 Freeboard re-arranged.

Particulars of fiddley, funnel and ventilator coamings:—

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways :—

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

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

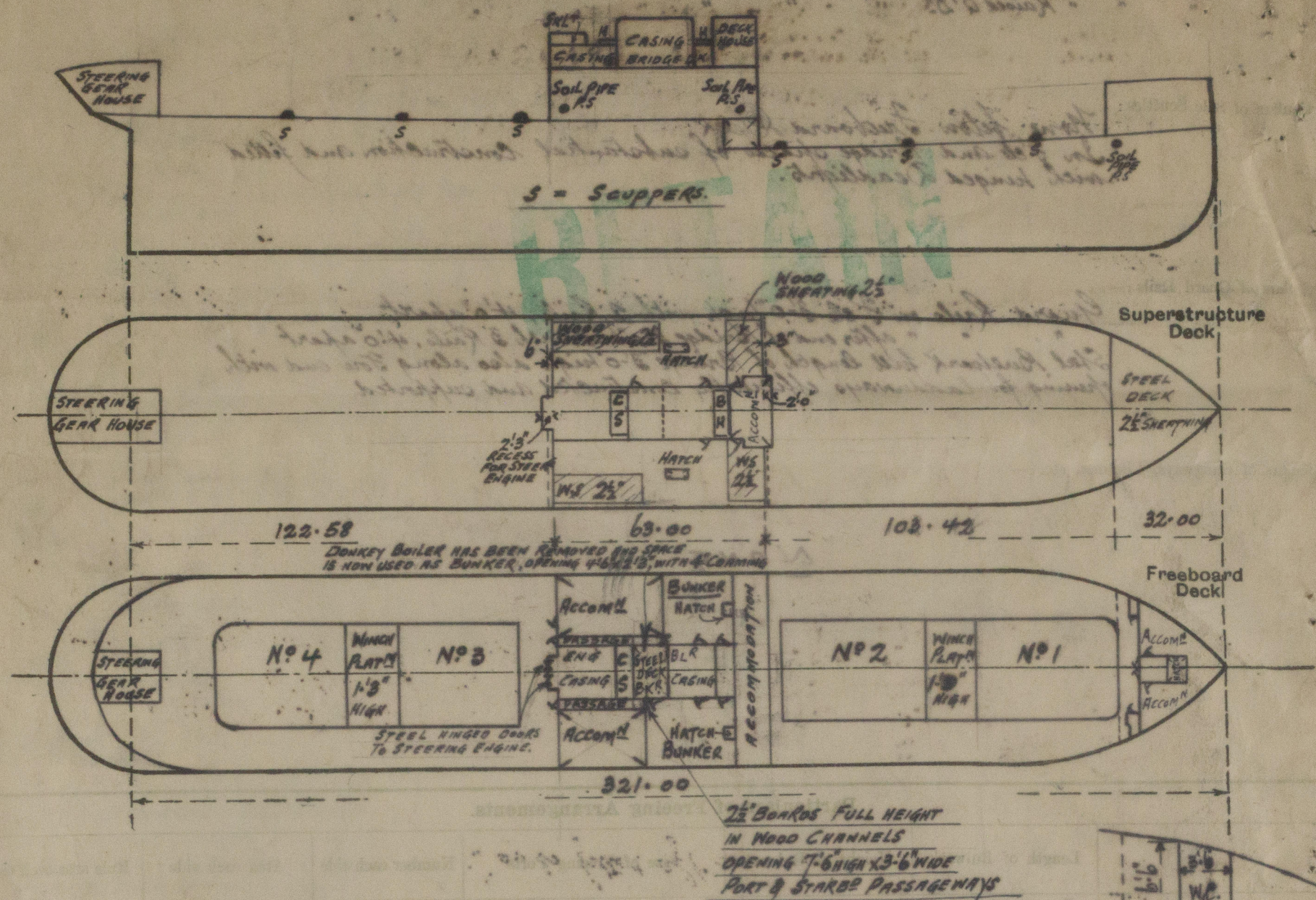
all Goose-neck Tops and
heights measured to mouths
no shifting holes or closing
arrangements provided

Particulars of Gangway Cargo and Coaling Ports:—

NONE

Akerside

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:—

A Timber assignment is desired, for which the following particulars are given.
D.B. Tanks. Only the E & B Room Tank is fitted with Centre Division aft.
Bulwarks on Fore & Raised Quarter Decks 5'0" & 3'6" high. plating 1/2" thick
Rail 6" x 3 1/2" x 40 Rr. Stays 8" x 38 full plate spaced 5'0" to 6'0" apart secured to Bulwark
by single lug 3" x 3 1/2" x 38 and to Deck by single lug 3" x 3 1/2" x 40
King Bolts fitted on Rail Bar only about 14'0" apart.
No Socket fitted on Deck.
Alternative Hand screw steering Gear is fitted aft in steering Gear House.

This vessel has been measured afloat
while discharging cargo of Timber.

The following information was received on board.

| | | | |
|-------|---|------|------|
| 18.11 | = | 3900 | tons |
| 18.4 | = | 3800 | " |
| 18.34 | = | 3700 | " |
| 14.11 | = | 3600 | " |
| 14.4 | = | 3400 | " |
| 14.1 | = | 3300 | " |

Builder's name and yard number

Names of sister ships

Owners Quayside Shipping Co. Ltd. (Connell & Grace Ltd. Managers)

Dec 2 11 0 Received by me



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