

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Single Ship, T. 1~~
 having Complete superstructure.

(Type of Superstructures.)

Ship's Name "ISLANDER"	Nationality and Port of Registry British London	Official Number 161325	Gross Tonnage 1598	Date of Build 1929-11
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Port of Survey Singapore
 Date of Survey 28th Nov. 1932
 Name of Surveyor John Wormald
 Particulars of Classification +100 AI

Moulded Dimensions: Length 235.0' Breadth 41.75' Depth 17.25'
 Moulded displacement at moulded draught = 85 per cent. of moulded depth 3015 tons
 Coefficient of fineness for use with Tables .733

Depth for Freeboard (D) Moulded depth ... <u>17.25'</u> Stringer plate ... <u>0.50'</u> Sheathing on exposed deck <u>2 1/2"</u> $T \left(\frac{L-S}{L} \right) = .21 \left(\frac{17.5}{235} \right)$ Depth for Freeboard (D) = <u>17.31'</u>	Depth correction (a) Where D is greater than Table depth (D - Table depth) R = $\frac{17.31 - 15.64}{1.64} = 2.96$ (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) <u>41.75'</u> Standard Round of Beam = $\frac{B \times 12}{50} = 10.02'$ Ship's Round of Beam <u>8"</u> = $\frac{8}{2.02}$ Difference Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{2.02^2}{4} \times \left(1 - \frac{47.68}{24} \right)$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <u>open</u>	<u>35.5</u>	<u>17.83</u>	<u>8'0"</u>		<u>17.83</u>
" overhang ...					
R.Q.D. enclosed					
" overhang					
Bridge enclosed <u>open</u>	<u>98.83</u>	<u>49.41</u>	<u>8'0"</u>		<u>49.41</u>
" overhang aft					
" overhang forward					
F'cle enclosed ...	<u>68.75</u>	<u>42.43</u>	<u>8'0"</u>		<u>42.43</u>
" overhang	<u>26.57</u>	<u>13.28</u>			<u>13.28</u>
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<u>203.50</u>	<u>122.95</u>			<u>122.95</u>

Standard Height of Superstructure 6.0
 " " R.Q.D.
 Deduction for complete superstructure 29.50
 Percentage covered $\frac{S}{L} = 26.59$
 $\frac{S_1}{L} = 52.32$
 $\frac{E}{L} = 52.32$
 Percentage from Table, Line A.
 (corrected for absence of forecastle (if required))
 Percentage from Table, Line B. 38.32
 (corrected for absence of forecastle (if required))
 Interpolation for bridge less than 2L (if required)
 Deduction = 11.30

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	<u>33.50</u>	1	<u>33.50</u>	<u>42.36.00</u>	<u>33.50</u>	1	<u>33.50</u>
1/4 L from A.P. ...	<u>14.91</u>	4	<u>59.64</u>	<u>16.15.11</u>	<u>14.91</u>	4	<u>59.64</u>
1/2 L " ...	<u>3.68</u>	2	<u>7.36</u>	<u>5.37.8</u>	<u>3.68</u>	2	<u>7.36</u>
Amidships ...		4				4	
3/4 L from F.P. ...	<u>7.37</u>	2	<u>14.74</u>	<u>8.6.15</u>	<u>6.15</u>	2	<u>12.30</u>
1/4 L " ...	<u>29.82</u>	4	<u>119.28</u>	<u>28.24.59</u>	<u>24.59</u>	4	<u>98.36</u>
F.P. ...	<u>67.00</u>	1	<u>67.00</u>	<u>57.54.38</u>	<u>54.38</u>	1	<u>54.38</u>
Total	<u>301.5</u>		<u>301.52</u>				<u>265.54</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{35.98}{18} \left(.75 - \frac{433}{24} \right) = .63$

If limited on account of midship superstructure.

Mean actual sheer aft = Excess
 Mean standard sheer aft

Mean actual sheer forward = Deficient
 Mean standard sheer forward

Length of enclosed superstructure forward of amidships = Deficient
 " " aft of " = Sheer

Standard	Sheer Forward	Actual
7.37 3 22.11	6.15 3	18.45
29.82 3 89.16	24.59 3	73.77
67.00 1 67.00	54.38 1	54.38
178.57	146.60	
		<u>82.10%</u>

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 17.29
 Summer freeboard = 1.90
 Moulded draught (d) = 15.39

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.85 - 3 3/4Addition for Winter North Atlantic Freeboard (if required) = 2

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 3,200$
 Tons per inch immersion at summer load water line

T = 19.33Deduction = $\frac{\Delta}{40 T}$ inches4.14 = 4 1/4

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. ...

29.40
30.55

2.96
11.30

.63
.24

3.83
1.54

7.71
22.84

2.96
11.30

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~and~~ 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 " " ...

1 - 10 3/4
1 - 2 3/4
1 - 6 1/2
1 - 7
2 - 2 1/2
2 - 4 1/2

1 - 10 3/4
1 - 2 3/4
1 - 6 1/2
1 - 7
2 - 2 1/2
2 - 4 1/2

1 - 10 3/4
1 - 2 3/4
1 - 6 1/2
1 - 7
2 - 2 1/2
2 - 4 1/2

002816-00282-005 1/2

29 NOV 1937

RECEIVED

27 MAR 1933

RECEIVED

16 JAN 1934

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

* 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. ✓

Funnel and ventilator coamings in efficient condition.

Funnel and ventilator coverings in efficient condition.
Engine room skylight of steel with mushroom covers, efficient height 21", no ficcley gratings

On frigate and deck:— One to chain locker with cast steel lid and bayonet joint fastenings.

Particulars of Companionways :—
On foreboard deck forward leading to main deck :— one steel companionway 5'0" x 3'9" x 4'0" high; doors of 1½" wood, solid construction and operable both sides; sill 9" —

Two imposts, companionways, on fore and aft leading to main deck.

Superstructure deck:-

4 @ 18" diam.; runways 36" X 0.4" leading to holes and forecastle spaces
2 @ 9" " ; " 36" X 0.4" " fore plate and explosive locker
8 @ 6" X 4" G.N. vents, 14" high leading to lavatories on main deck.

Freeboard deck:-

4 @ 18" diam; coatings 24" x 0.4" leading to machinery spaces.

all ventilators are fitted with wood plugs and canvas covers.

Superstructure deck:-

Superstructure deck:-
2 @ 5" diam; 7" high to fore and aft peak tankes. Fitted with wood plugs and canvas covers
1 @ 4" " ; 26" " " double bottom tank forward. Fitted with gauge wire.

all other air pipes are ^{permanently} connected to overflow and gas escape pipes on port and starboard sides of fuel tank. ✓

2 cargo doors 6'0"x3'6" with stiffened steel W.T. doors, wing bolt fasteners; in shelter ^{hinged} turn deck (IP 15)

2 " " 7'6" x 5'6" with double hinges & stiffeners steel W.T. doors, wing bolt fasteners; in shelter turn west. (198)

Particulars of Scuppers and Sanitary Discharge Pipes —

all sanitary discharges and scupper pipes discharging below the freeboard deck are fitted with gunmetal storm valves and have efficient traps or covers at the inner end.

Particulars of Side Scuttles:

Side scuttles on ship's sides in shelter deck space are of solid construction and fitted with hinged steel deadweights.

Particulars of Guard Rails:—

On exposed deck:—

3'6" high with 4 bars, stanchions approximately 4'6" 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
Shelter deck			18" x 21"	4	10.55	
Forward Well						

State position of each freeing port ... } After Well:—
(F. and A. position and height above deck edge) } Forward Well:—

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— one bar & 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	—							
Raised Quarter Deck Bulkhead	—							
Bridge, After Bulkhead	—							
Bridge, Forward Bulkhead	0.40	0.40	3x2½"x0.4" Γ	24"	None	{ 2@5'x2'0" 2@6'3"x4'0" 1@3'6"x3'0"	8" 3" 30"	8'0"
Forecastle Bulkhead	—	0.25	4½x3x36	26"	None	None	—	8'0"
Trunk, Aft	—							
Trunk, Forward	—							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	0.40	0.32	3x2½"x0.4" Γ	25"	None	5'0"x2'6"	18"	8'0"
Exposed Machinery Casings on Superstructure Decks	—	0.32	3x2½"x0.4" Γ	25"	None	None	None	8'0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	—							
Deckhouses on Flush Deck Ships	—							

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

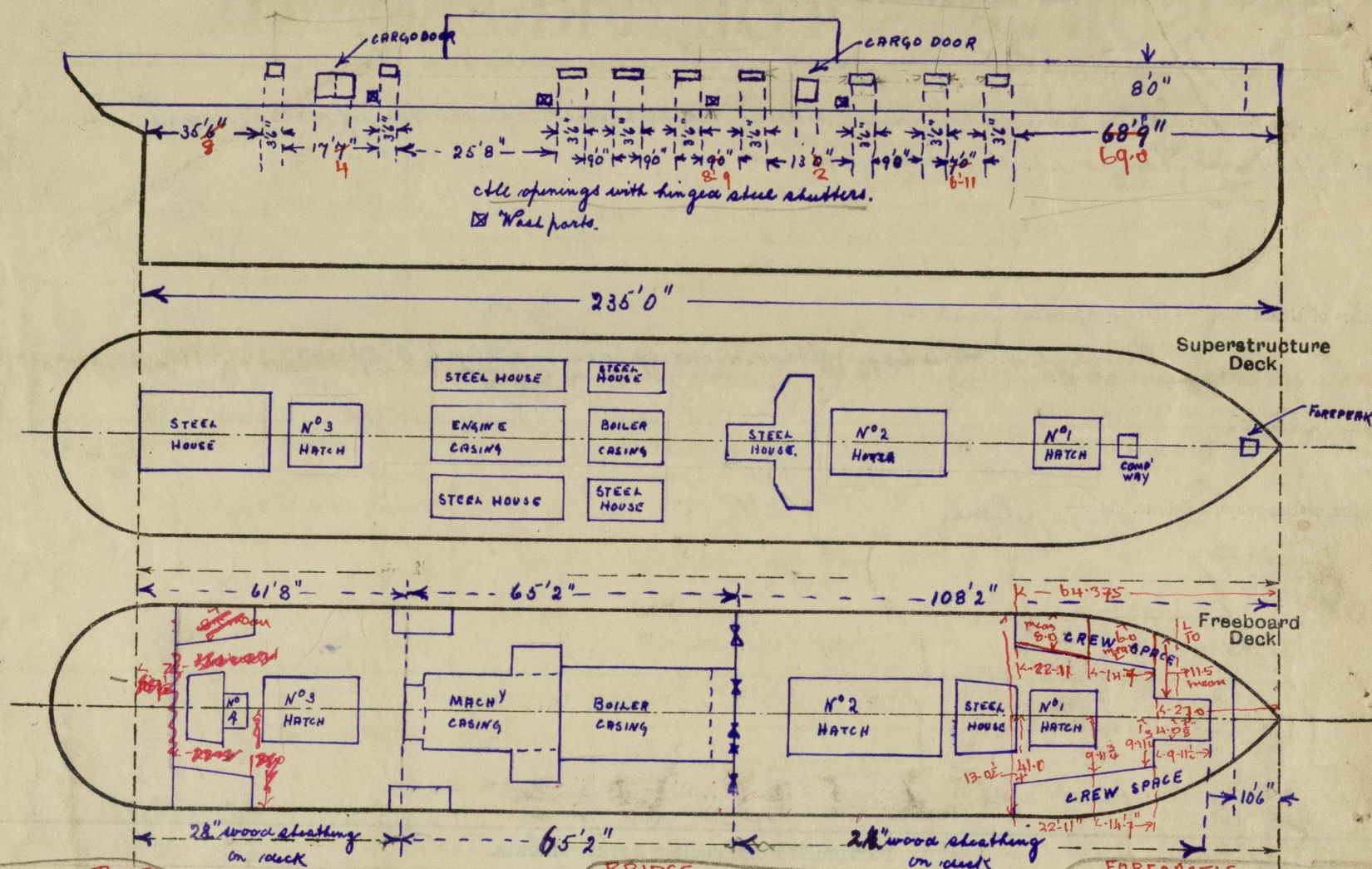
Poop Bulkhead	— open
Raised Quarter Deck Bulkhead	—
Bridge, After Bulkhead	— open
Bridge, Forward Bulkhead	— Hinged steel doors, operable both sides
Forecastle Bulkhead	—
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	— Hinged steel doors, operable both sides
Exposed Machinery Casings on Superstructure Decks	—
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	—
Deckhouses on Flush Deck Ships	—



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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:—



POOP
351.67 open.

FORECASTLE

$64.375 - 9.96 \times 4.07 = 40.53$

$44.53 \times 9.98 = 445.50$

$11.51 \times 22.92 = 263.80$

$\frac{449.83}{20.5}$

$64.375 - 21.945 = 42.43 = \text{equiv}$

overhang $= 69.0 - 42.43 = 26.57$ with 2

State any special features in the construction of the ship:—

Draft	Displacement
13'0"	2628 tons
14'0"	2854 "
15'0"	3083 "
16'0"	3315 "

For castle 64.375 ✓

Reams 9.96×1.07 10.53
 14.58×9.98 145.50
 11.51×22.92 263.80

$$\begin{array}{r} 449.83 \\ 20.50 \overline{) 449.83} \\ \hline 21.945 \end{array}$$

42.43 ✓

$$\begin{array}{r} 69.00 \\ 42.43 \overline{) 69.00} \\ \hline 26.57 \end{array}$$

Builder's name and yard number Grangemouth Dockyard Co. Ltd., Grangemouth

Owners Christmas Island Phosphate Co. Ltd.

Received by me

Expenses \$10.00