

DISCLOSED SECTION 32684
Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD. No. 426Index. No. 32684
(For London Office only.)

14 NOV 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Raised Quarter Deck, Bridge & Forecastle
HWA LOONG (Type of Superstructures) British
Ship's Name SHANGHAI Nationality and Port of Official Number 160406 Gross Tonnage 739 Date of Build 1928-4
SHIRANI Registry British
BULIMBA London
Moulded Dimensions: Length 180'-0" Breadth 31'-0" Depth 13'-6"
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1362 tons
Coefficient of fineness for use with Tables 0.745

Port of Survey Brisbane
Date of Survey 16.10.24.1 Sept. 1932
Name of Surveyor J. E. Tate
Particulars of Classification 100 A.1

Depth for Freeboard (D) Moulded depth ... 13.50
Stringer plate ... 03.
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) = .21 \times \frac{49}{180} = .06$
Depth for Freeboard (D) = 13.59

Depth correction
(a) Where D is greater than Table depth
(D-Table depth) R = $(13.59 - 12.00) 1.385 = +2.20$
(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) 31.00
Standard Round of Beam = $\frac{B \times 12}{50} = 7.44$
Ship's Round of Beam = 8
Difference .56
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.56}{4} \times .2862 = -.04$

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 ...	46'		7'-7 1/2"	✓	99.32
" overhang ...	101.00	99.32	7'-7 1/2"		
Bridge enclosed ...	55'		7'-7 1/2"		
" overhang aft ...	1.00				
" overhang forward ...	28.33	.50		✓	.50
F'cle enclosed ...	29'	28.33	7'-7 1/2"	✓	28.33
" overhang ...	.67	.33			.33
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	131.00	128.48			128.48

Standard Height of Superstructure 6.0
" " R.Q.D. ✓
Deduction for complete superstructure 24.00
Percentage covered $\frac{S}{L} = 72.78\%$
" " $\frac{S_1}{L} = 71.38\%$
" " $\frac{E}{L} = 71.38\%$
Percentage from Table, Line A. 64.70%
(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 = $24.00 \times .647 = -15.53$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	28.00	1		28.00	27 1/2	27.00	1		27.00
1/2 L from A.P. ...	12.46	4		49.84	12	11.85	4		47.40
2/3 L " ...	3.08	2		6.16	3	2.96	2		5.92
Amidships ...	✓	4		✓	0	✓	4		✓
2/3 L from F.P. ...	6.16	2		12.32	6 1/2	6.22	2		12.44
1/2 L " ...	24.92	4		99.68	27 1/2	24.88	4		99.52
F.P. ...	56.00	1		56.00	54	57.00	1		57.00
Total ...				252.00					249.28

Mean actual sheer aft = 19.47 > 75%
Mean standard sheer aft =
Mean actual sheer forward = Excess
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships = .061
" " aft of " = .5

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{2.72}{18} \times (.75 - .3639) = +.06$
If limited on account of midship superstructure. $.156 \times \frac{.161}{.260} = .096$
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 = 13.74
Summer freeboard = 75.7
Moulded draught (d) = 12.99

Deduction for Tropical freeboard and addition for
Winter freeboard = $\frac{d}{4}$ inches = 3.25 = 3 1/4

Add for Winter North Atlantic Freeboard (if required) = 2

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

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

= 3 1/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{745 + .63}{1.36} = \frac{1425}{1.36}$

	+	-
Depth Correction ...	2.20	✓
Deduction for superstructures ...	✓	15.53
Sheer correction ...	.06	✓
Round of Beam correction ...	✓	.04
Correction for Thickness of Deck amidships ...	1.78	✓
Other corrections, scantlings, etc. ...	✓	

4.04 15.57 - 11.53
Summer Freeboard = 9.22

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

Tropical Fresh Water Line above Centre of Disc ...	6 1/2
Fresh Water Line " " ...	3 1/4
Tropical Line " " ...	3 1/4
Winter Line below " " ...	3 1/4
Winter North Atlantic Line " " ...	5 1/4

Tropical Fresh Water Freeboard ...	0' - 9 1/4"
Fresh Water " " ...	0' - 2 3/4"
Tropical " " ...	0' - 6"
Winter " " ...	0' - 6"
Winter North Atlantic " " ...	1' - 0 1/2"

16 NOV 1932

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RECEIVED 4 MAY 1936

RECEIVED 3 APR 1933

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS				
Freeboard Deck x Super. Deck				
Description of Hatchway	...	...	...	...
Dimensions of Hatchway	...	...	...	...
COAMINGS	Height above Deck	...	...	...
	Thickness	...	...	...
	Stiffeners	...	...	...
	Brackets, Stays	...	...	...
HATCH BEAMS	Number	...	...	...
	Spacing	...	...	...
	Scantling and Sketch	...	...	...
	Bearing Surface	...	...	...
FORE AND AFTERS	Number	...	...	...
	Spacing	...	...	...
	Unsupported Lengths	...	...	...
	Scantling* and Sketch	...	...	...
HATCH COVERS	Material	...	...	...
	Thickness	...	...	...
	How fitted	...	...	...
	Bearing Surface	...	...	...
Spacing of Cleats	...	...	...	...
Number of Tarpaulins	...	...	...	...
<p>*Are wood fore and afters steel shod at all bearing surfaces?</p> <p>Are battens and wedges efficient and in good condition?</p> <p>Are tarpaulins in good condition and in accordance with rule requirements?</p> <p>Are lashings provided in accordance with rule requirements?</p>				

Particulars of fiddley, funnel and ventilator coamings:—

On Superstructure Deck.
 Engine room skylight of steel.
 Fiddley grating fitted with efficient storm covers,
 permanently attached.
 Ventilators of strong construction and efficiently supported.

Particulars of Flush Bunker Scuttles:—

Two each side, on freeboard deck, within superstructure.
 Cast-iron, of heavy construction, 20" dia. cast-iron grating covers, secured with bayonet joints.

Particulars of Companionways:—

None.

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

On Forecastle:—Two, 24" dia. Coamings 2'-10" high. Three, 9 1/2" dia. Coamings, 2'-6" high.
 In Well:—Two, 24" dia. Coamings 2'-10" high.
 On Bridge's Raised Quarter Deck:—Four, 24" dia. Coamings 2'-10" high, and two, 10" dia. Coamings 2'-6" high.
 All fitted with wood plugs & canvas covers.

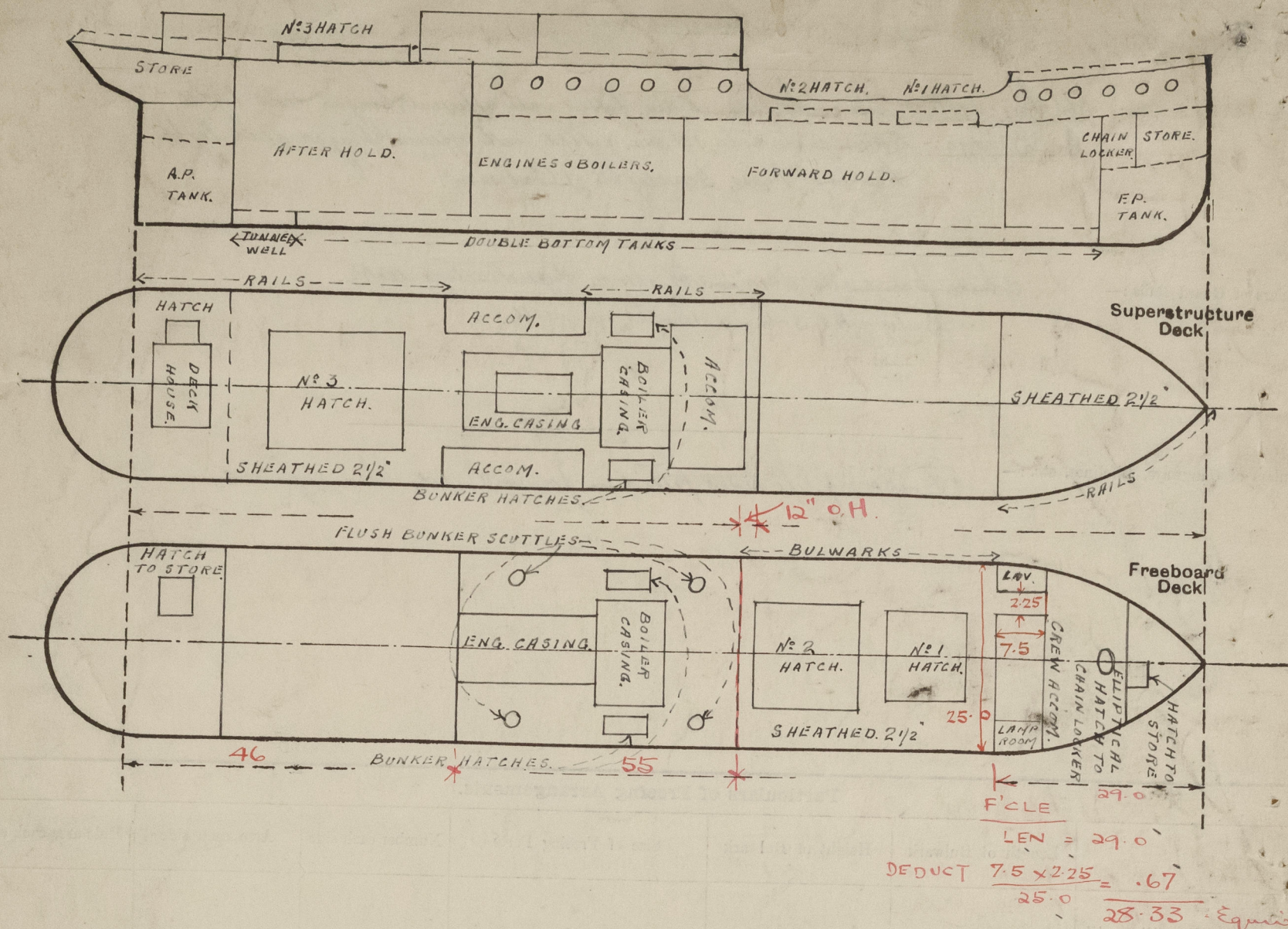
Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

Forecastle:—Two, 22" high, 3" internal dia. Freeboard Deck:—Two, 22" high 3" internal dia.
 Raised Quarter Deck:—Three, 24" high, 3" internal dia. and five, 16" high, 2" internal dia. (one in each alleyway).
 Wrought-iron, with brass screwed caps, and wood plug in outlet.

Particulars of Gangway Cargo and Coaling Ports:—

None.

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:— Cargo vessel, usually trading in India, Island Trade, Mandated Territory, New Guinea. Now employed on shipping and afloat, in conjunction with Special Service, No. 1.

Hatches on freeboard deck:— (inside fore-castle) To fore peak, Rectangular steel framing 23" x 18" x 7" high, 2 1/2" rivets, 2 1/2" wood covers, cleats. ✓
 To chain locker:— Elliptical steel framing 23" x 18" x 6" high, fitted with hinged steel covers secured with 1/8" hinged bolts, battens & tarpaulins. ✓
 Bunker hatches:— One each side, 7' x 2'-6". Framing, 2'-6" x 3'-4". wood covers, 2 1/2" thick, hatch rivets 2 1/2", cleats, battens & tarpaulins. ✓
 To store, aft:— Rectangular steel framing, 2'-6" x 2'-6" & 2'-6" high, x 3'-0", wood covers 2 1/2" thick, hatch rivets 2 1/2", cleats, battens & tarpaulins. ✓
 Hatches on Superstructure Deck:— Bunker hatches, one each side, 5'-0" x 2'-6". Framing 18" x 3'-4", fitted with grating covers 2 1/2" thick rivets 2 1/2", cleats, battens & tarpaulins. ✓

Sheerstrake:— .48" to .72" at break, butt lap 13'-9" for 1/2 of break and 8'-3" aft of break, quadruple riveting. ✓
 Upper deck stringer plate:— .32" to .48" at break, butt lap 8'-6" for 1/2 of break, triple riveted, and 13'-9" aft of break, butt to adjacent plate, secured with triple riveted butt strap. ✓
 No. 1 Upper deck plate:— (adjacent to stringer) double riveted butt lap, 13'-9" for 1/2 of break and 4'-6" aft of break. ✓
 Bridge deck sheerstrake:— .32" to .40" at break, butt lap 4'-6" aft of break, triple riveted. ✓
 Bridge deck stringer plate:— .34" butt lap 12'-0" aft of break, double riveted. ✓
 Bulwark rail:— 5" x 3" angle, increased to 7" x 3" bulb angle section, 7'-0" long, (connected with riveted butt strap) to break, and attached to bulkhead with heavy flanged brackets on fore and after sides. ✓

Builder's name and yard number: *Greenock & Grangemouth Dock, No. 1414.*

Names of sister ships: *"MALAKE"*

Owners: *Burns, Philp & Co. Ltd.*

Fee £ *7* : *4* : *0*

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