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Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. **2407**
(For London Office only.)

13 JUN 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having **POOP, Bridge & Forecastle.**Port of Survey **MELBOURNE**
Rgt No **5055**Date of Survey **April 29th 1932**Name of Surveyor **A. J. W. Evans**Particulars of Classification **100 A1**
No. 3-8.29

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
CABARITA	British Glasgow	132455	4364	1915-4

Moulded Dimensions: Length **364.7'** Breadth **51.4'** Depth **28.5'**
Moulded displacement at moulded draught = 85 per cent. of moulded depth **ie 24.225 ft = 10128 tons**
Coefficient of fineness for use with Tables **.483**

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	... .. 28.50 28'-6"	(a) Where D is greater than Table depth (D-Table depth) R =	11.88	Moulded Breadth (B)	51.4 51.25
Stringer plate	... .. .25 .06"	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	11.90	Standard Round of Beam = $\frac{B \times 12}{50}$	12.33 12.30
Sheathing on exposed deck				Ship's Round of Beam	13.0 12.50
$T \left(\frac{L-S}{L} \right) =$				Difference	.67 .20
Depth for Freeboard (D) =	28.55 ft	If restricted by superstructures		Restricted to	.20 1.6052 = 1.03
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	.01

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	30'	30'	8'		30'	Standard Height of Superstructure 7'-13 1/4" 4.15
" overhang ...						" " R.Q.D. ...
R.Q.D. enclosed ...						Deduction for complete superstructure 39.65
" overhang ...						Percentage covered $\frac{S}{L} =$ 39.58
Bridge enclosed ...	80'	81'	8'		81'	" " $\frac{S_1}{L} =$ 39.48
" overhang aft ...	1-4"					" " $\frac{E}{L} =$ 39.48
" overhang forward						Percentage from Table, Line A.
F'cle enclosed ...	33'	33'	8'-1"		33'	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B.
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than .2L (if required)
Tonnage opening aft ...						Deduction = .2706 x 39.65 = 10.73
" " forward						
Total ...	144'-4"	144'			144'	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	46.47	1		46.47	45.7	45.7	1		45.7	Mean actual sheer aft = $\frac{128.5}{139.41} = 92\%$ EXC.
1/4 L from A.P. ...	20.68	4		82.72	18.7	18.7	4		74.8	Mean actual sheer forward = $\frac{330.5}{278.82} = 118\%$ EX.
1/2 L " ...	5.11	2		10.22	4.0	4.0	2		8.0	Mean standard sheer forward
Amidships ...	0	4		0	0	0	4		0	Length of enclosed superstructure forward of amidships = 37'
3/4 L from F.P. ...	10.22	2		20.44	12.5	12.5	2		25.0	" " aft of " = 42'-8"
1/4 L " ...	41.36	4		165.44	49.0	49.0	4		196.0	
F.P. ...	92.94	1		92.94	109.5	109.5	1		109.5	
Total ...				418.23					457.0	
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{40.77}{18} \left(.75 - \frac{144}{729.4} \right) = 1.25$										If limited to maximum allowance of 1 1/2 ins. per 100 ft. No.
If limited on account of midship superstructure. No.										

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **28.55**
Summer freeboard = **5.33**
Moulded draught (d) = **23.22**

for Tropical freeboard and addition for

freeboard = $\frac{d}{4}$ inches = **5.80**

Winter North Atlantic Freeboard (if

For

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Tons per inch immersion at summer load water line

T = **37.62**Deduction = $\frac{\Delta}{40T}$ inches

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{1037.60}{1.36} = 1.463$

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

Summer Fre

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, 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										
Description of Hatchway		No.1.	No.2.	No.3.	No.4.	No.5.	Bridge Space Hatch to Flag Cross Bunker	Fiddley top Coal Hatch over Saddleback	Bridge deck Bunker Hatch	From po
Dimensions of Hatchway		31'-6" x 22'	36' x 22'	11' x 22'	33' x 22'	33' x 22'	4'-8" x 22'	6'-8" x 12' x 4' 12' x 9'	6' x 4'	6' x 4'
COAMINGS	Height above Deck	46 1/2" at centre & 42" at sides					Sloped 27" to 10"	9" & 10" bulb Angles	31"	31"
	Thickness	.6	.6	.6	.6	.6	.5	9" angle	.38	.38
	Stiffeners	Longitudinal bulb	Angle 9 x 3 1/2	2' from top of Coaming						
	Brackets, Stays									
HATCH BEAMS	Number	5	5	1	5	5		12' Hatches		
	Spacing	5'-3"	6'-0"	5'-6"	5'-6"	5'-6"		3 deck beams, 8' Hatches		
	Scantling and Sketch	38" plating 32 1/2" deep at centre & 27" at ends						2 deck beams 6' Hatches		
	Bearing Surface	4" x 3" x 3/8" angles top & bottom						1 deck beam through openings		
FORE AND AFTERS	Number									
	Spacing									
	Unsupported Lengths									
	Scantling and Sketch									
HATCH COVERS	Material	Wood	wood	wood	wood	wood	wood	wood	wood	wood
	Thickness	3"	3"	3"	3"	3"	2 3/4"	3"	3"	3"
	How fitted	Fore & Aft	7 & A	7 & A	7 & A	7 & A	7 & A	7 & A	7 & A	7 & A
	Bearing Surface	4" on beams	& 3" on Hatch ends				2" 3	1 3/4" 3	1 3/4" 3	1 3/4" 3
Spacing of Cleats		24"	24"	24"	24"	24"	24"	24"	24"	24"
Number of Tarpaulins		2.	2.	2.	2.	2.	2.	1.	2.	2.
<p>*Are wood fore and afters steel shod at all bearing surfaces? Yes</p> <p>Are battens and wedges efficient and in good condition? Yes</p> <p>Are tarpaulins in good condition and in accordance with rule requirements? Yes</p> <p>Are lashings provided in accordance with rule requirements? Yes.</p>										

Particulars of fiddley, funnel and ventilator coamings:— Fiddley gratings fitted with efficient steel hinged covers. Fiddley casing 8'-high, with steel hinged doors. Funnel coaming 27" high. Two 2'-6" heavy steel ventilators to stokehold. Four ventilators to Eng Room (2 fore & ones - 3' coamings, 2 after - 2' coamings) engine room skylights - steel casing riveted to structure, strong steel covers with bull's eye glass. Bunker Hatch abaft funnel - 12' wide by 9' fore & aft, 9" coaming & fittings - as above.

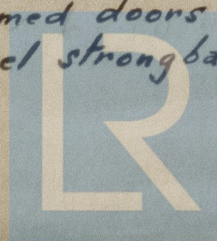
Particulars of Flush Bunker Scuttles:—

Companionways:— Steel casing on poop, 9ft wide by 8'-6" fore & aft, 7'-6" high, riveted to structure. One 1 3/4" teak hinged door (looking aft) 4'-10" x 2'-6", leading to accommodation space. 1 3/4" teak hinged door 23" x 4'-10" on starboard side aft, to W.C. Height of sills - 16".

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— Two 18" & two 24" Ventilators on main deck, abreast foremast, Four 18" Ventilators abreast mainmast, 2-18" Ventilators at poop front - all with 3" coamings on main deck. Samson posts for derricks, forming Ventilators with mushroom tops - fore-castle, 2 at front & 2 behind bridge, 2 on poop. Fore-castle - three 9" Ventilators with 2'-6" coamings & two 6" Ventilators with 19" coamings. 6 - Seven Ventilators, from 6" to 18" with 30" coamings.

Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— On freeboard deck - Four 3" air pipes 30" high in necks (one each side of fore & main masts) close to & attached to bulwarks, well protected with steel, in waterway - four C.I. Swan necks 16" high. On bridge deck - cast iron swan necks, close to bulwarks. On poop, one air & filling pipe (2 1/2" W.I.) each side 24", 24" above deck.

Cargo and Coaling Ports:— 2 hinged doors in ships side, one port & one starboard side space, 7'0" from bridge front. Strong framed doors (steel), jointed with (6) - 1 1/4" dia hinged bolts through 3 channel strongbacks.





Particulars of Scuppers and Sanitary Discharge Pipes — Scuppers — 3 on fore well deck, each side, & 4 on after well deck each side, 4" x 3 1/2" oval. Discharges from fore-castle — One 2" & one 3" open discharge. Two 4" & one 3" sanitary discharges with storm valves. On bridge — Three 3" & three 2" open discharges, four sanitary discharges with storm valve. From poop — One 2" open discharge & one sanitary discharge with storm valve. { One 18" dia Ash shoot starboard side Amidships } with brass screw plug at inner end.

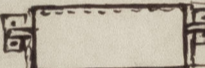
Particulars of Side Scuttles: In fore-castle — 8 port & 5 starboard, 9" scuttles with dead lights. In Bridge space — 6 " 8 " " " " " " " In poop — 6 " 7 " " " " " " " On poop front, bridge front & fore-castle ends, 14", 12" & 9" side lights with dead lights. No side scuttles fitted below freeboard deck.

Particulars of Guard Rails: — On fore-castle, after end of bridge & on poop — 3 bar rails 3'-6" high. On well decks & bridge deck — strong bulwarks with stiffeners to deck.

Particulars of Gangways, Lifelines, etc.: — lifeline fitted in each of the forward & after wells, with provision for using same on port & starboard sides.

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	109'-0"	3'-6"	40" x 21"	4	23.3 sq ft	22.
Forward Well	112'-6"	3-6	40" x 21"	4	23.3 sq ft	22.5

State position of each freeing port { After Well: — Poop 4' 2" x 30'-10" x 29'-4" x 30'-10" x 8'-10" } BRIDGE
(P. and A. position and height above deck edge) { Forward Well: — Bridge 8' 8" x 30'-2" x 35'-8" x 28'-9" x 9'-3" } FORECASTLE
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Shuttters hinged 1/3 from top (no bars) 

Particulars of Superstructures, Trunks, Casings, Deckhouses.

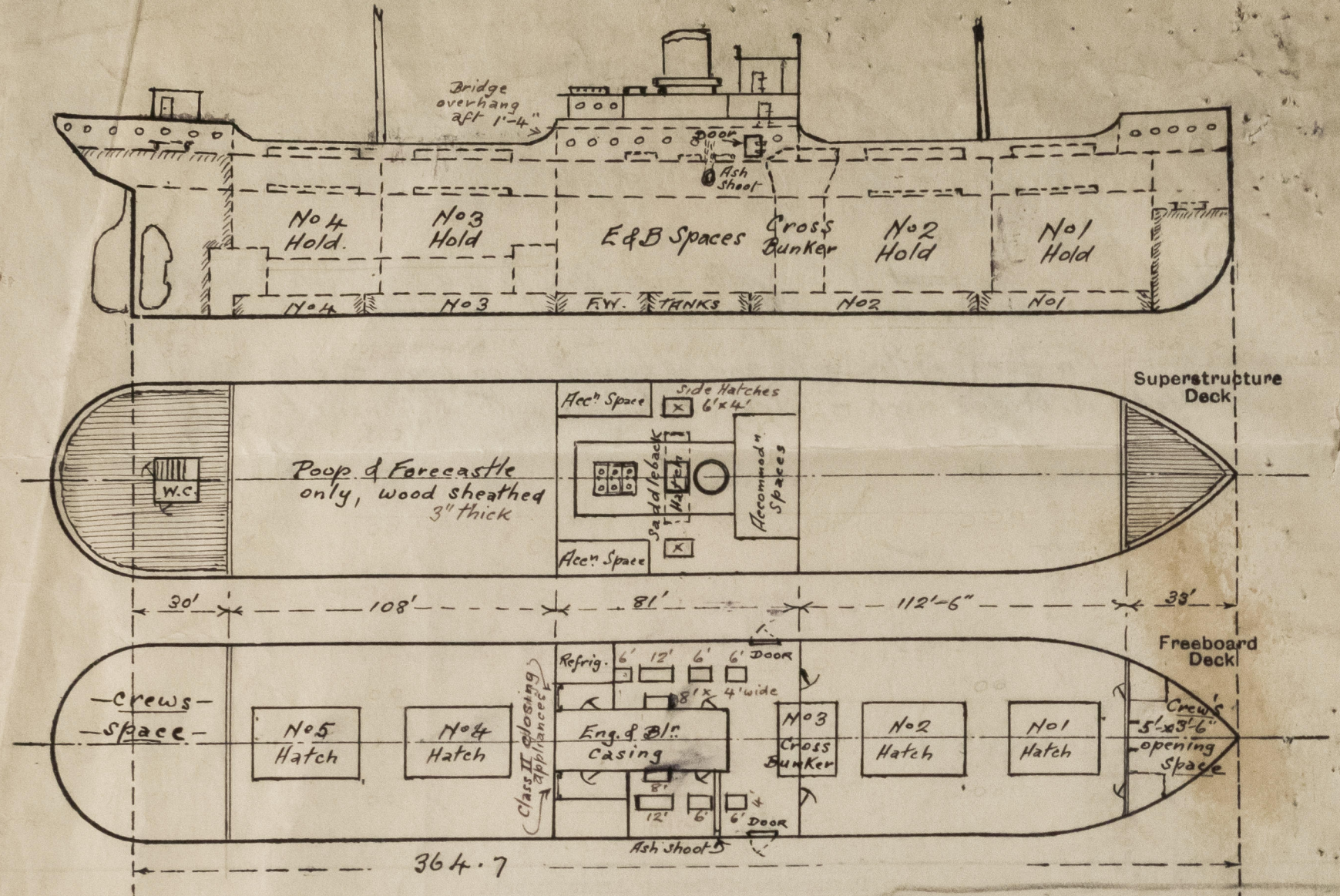
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..	.4"	.4"	6" x 3 1/2" x 38" L 28"		✓	6 side scuttles with deadlights only	✓	8'
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	12'-6"	✓	✓
Bridge, After Bulkhead	✓	.38"	3 1/2" x 3" x 38" L 34"		✓	Two - 6' x 7'-2"	None	8'
Bridge, Forward Bulkhead ... ..	.5"	.44"	8" x 3" bulk 6 L 27" to 30"		✓	brackets top & bottom " 3' x 5'	18	8'
Fore-castle Bulkhead ... ..	.3"	.3"	3 1/2" x 3" x 3 L 30"		✓	3'-6" x 5'	19"	8'-1"
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	After end of Bridge	.38"	3 1/2" x 3" x 38" L 34"		✓	side lights only	✓	8'
Exposed Machinery Casings on Super-structure Decks ... ..	.3"	.3"	3 1/4" x 3 1/4" x 5/16" L 30"		✓	2' x 5'	18"	8'
Machinery Casings within Superstruc-tures not fitted with Class I Closing appliances ... ..	.38"	.3"	3 1/2" x 3" x 38" L 34"		✓	2' x 4'-10"	18"	8'
Casings on Flush Deck Ships ...	✓	✓	✓	✓	✓	✓	✓	✓

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

Fore-castle Bulkhead	No openings — only scuttles with deadlights.
After Deck Bulkhead	✓
After Bulkhead	shifting boards in 2" riveted channels — full height of opening
Forward Bulkhead	hinged steel doors .44" thick secured with lugs & (15) - 1" dia studs
Fore-castle Bulkhead	1 teak & 1 steel, hinged doors to W.C. & galley — Yes . 5' opening amidships with no closing app.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Super-structure Decks	steel hinged doors 5/16" thick — Yes
Machinery Casings within Superstruc-tures fitted with Class I Closing appliances	steel hinged doors 5/16" thick — Yes
Casings on Flush Deck Ships ...	✓

Calcutta

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cat, 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:— *None.*

$\text{D} = 24.22$
 $\text{hul} = .17$
 $24.39 = 24' 4\frac{3}{4}"$

over 17

name and yard number *W. Hamilton & Co Ltd. Port Glasgow. Yard No 300.*

sister ships *S.S. "MACEDON"*

Bank Line Ltd (A. Weir & Co., Mgrs)

0 0

Received by me

over 17

*over 17
0" high
rotated
deck*



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