

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>Wellington, N.Z.</u>
having <u>Poop, Bridge and Forecastle with continuous Promenade Deck.</u>					Date of Survey <u>21st September, 1932</u>
(Type of Superstructures.)					Name of Surveyor <u>[Signature]</u>
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification <u>+100 A.L.</u>
<u>"MAUNGANUI"</u>	<u>British. Wellington.</u>	<u>127810</u>	<u>7527</u>	<u>12/1911</u>	<u>S.S. Syd. No. 3-11.24</u> <u>S.S. No. 28</u>
Moulded Dimensions: Length <u>430'0"</u> Breadth <u>55'6"</u> Depth <u>34'0"</u> (Upper Deck)					
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					
Coefficient of fineness for use with Tables _____					

Depth for Freeboard (D) Moulded depth Stringer plate Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = _____	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 = _____ If restricted by superstructures _____	Round of Beam correction Moulded Breadth (B) _____ Standard Round of Beam = $\frac{B \times 12}{50} =$ _____ Ship's Round of Beam _____ Difference _____ Restricted to _____ Correction = $\frac{\text{Diff}}{L} \times \left(1 - \frac{S_1}{L} \right) =$ _____
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed						Standard Height of Superstructure _____
" overhang						" " R.Q.D. _____
Q.D. enclosed						Deduction for complete superstructure _____
" overhang						Percentage covered $\frac{S}{L} =$ _____
Bridge enclosed						" $\frac{S_1}{L} =$ _____
" overhang aft						" $\frac{E}{L} =$ _____
" overhang forward						Percentage from Table, Line A. (corrected for absence of forecastle (if required))
Fore enclosed						Percentage from Table, Line B. (corrected for absence of forecastle (if required))
" overhang						Interpolation for bridge less than 2L (if required)
Trunk aft						Deduction = _____
" forward						
Tonnage opening aft						
" forward						
Total						

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product	
A.P.		1				1		Mean actual sheer aft = _____
1/4 L from A.P.		4				4		Mean standard sheer aft = _____
1/2 L "		2				2		Mean actual sheer forward = _____
3/4 L "		4				4		Mean standard sheer forward = _____
Amidships		4				4		Length of enclosed superstructure forward of amidships = _____
3/4 L from F.P.		2				2		" " aft of " = _____
1/4 L "		4				4		
F.P.		1				1		
Total								

Correction = $\frac{\text{Difference between sums of products}}{L} \left(75 - \frac{S}{2L} \right) =$ _____

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 = _____ Ft. Summer freeboard = _____ Moulded draught (d) = _____ Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = _____ Addition for Winter North Atlantic Freeboard (if required) = _____	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 = $\frac{\Delta}{40 T}$ inches = _____	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. Summer Freeboard = _____
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:-

Tropical Fresh Water Line above Centre of Disc	Tropical Fresh Water Freeboard	...
Fresh Water Line	"	"	Fresh Water	"
Tropical Line	"	"	Tropical	"
Winter Line below	"	"	Winter	"
Winter North Atlantic Line	"	"	Winter North Atlantic	"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	No 1 Prom Dk	No 2 Prom Dk	No 3(2nd) Boat Dk	No 4 Prom Dk	No 5 Prom Dk	No 2 Upp Dk	No 4 Upp Dk	Chain Locker	Fore Peak	Stores Hatch
Dimensions of Hatchway	11' x 12' 0"	7' 0" x 15' 0"	10' 5" x 8' 0"	12' 9" x 12' 0"	13' 6" x 12' 0"	17' 2" x 15' 0"	12' 9" x 12' 0"	2' 3" x 2' 6"	1' 10" x 1' 10"	4' 7" x 4' 6"
COAMINGS	Height above Deck ... 42" Thickness ... 3/4" Stiffeners ... 3/4" Brackets, Stays ... Nil	42" 44" 31" Nil	11 1/2" 31" Nil Nil	42" 44" 41" Nil	42" 41" 41" Nil	16 1/2" 14 1/2" 31" Nil	14 1/2" 31" Nil Nil	14 1/2" 31" Nil Nil	Recessed in casing with steel joist in halves 1/2" thick opening 5' 6" x 3' 6" sill - 5"	
HATCH BEAMS	Number ... 1 Scantling and Sketch ... 5' 6" x 1/2"	1 5' 0" x 1/2"	1 5' 1" x 1/2"	1 6' 4" x 1/2"	1 6' 9" x 1/2"	1 8' 10" x 1/2"	1 6' 4" x 1/2"			
Bearing Surface	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"			
FORE AND AFTERS	Number ... 3 Spacing ... 3' 0" Unsupported Lengths ... 5' 3" Scantling and Sketch ... 3' 0" x 1/2"	3 3' 0" 3' 0" x 1/2"	1 4' 0" 5' 0"	3 3' 0" 6' 0"	3 3' 0" 6' 0"	3 3' 0" 6' 0"	3 3' 0" 6' 0"	Nil	Nil	Nil
Bearing Surface	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"	3' 0" x 1/2"			
HATCH COVERS	Material ... Wood Thickness ... 2 1/2" How fitted ... Thwart Bearing Surface ... 2 1/2"	Wood 2 1/2" Thwart 2 1/2"	Wood 2 1/2" Thwart 2 1/2"	Wood 2 1/2" Thwart 2 1/2"	Wood 2 1/2" Thwart 2 1/2"	Wood 2 1/2" Thwart 2 1/2"	Wood 2 1/2" Thwart 2 1/2"	Wood 2 1/2" Thwart 2 1/2"	Wood 2 1/2" Thwart 2 1/2"	Nil
Spacing of Cleats	22"	22"	22"	22"	22"	22"	22"			
Number of Tarpaulins	3	3	2	3	3	2	2			

*Are wood fore and afters steel shod at all bearing surfaces? All fore and afters are of steel section. /
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? Ringplates provided on Nos. 1, 2, 4, & 5 Hatches only /

Particulars of fiddle, funnel and ventilator coamings:— All on Casings top 25' 0" above Freeboard Deck. /
No steel flaps fitted over fiddle gratings. /

Particulars of Flush Bunker Scuttles:— 3 on each side of Promenade Deck. Not in use. Secured in position permanently. /

Particulars of Companionways:— One to Crew on Forecastle Head steel 13" sill, opening at aft end 4' 9" x 2' 6", teak doors 1 1/2" thick, opens from both sides. / One on Forecastle Head to 3rd Class steel, 13" sill, opening 5' 0" x 2' 4", teak doors 1 1/2" thick, opens from both sides. / One on Poop to 2nd Class steel, 13" sill, opening 6' 0" x 3' 7", double teak door 1 1/2" thick, opens from both sides. / One at after end Bridge space, entrance in steel deckhouse, opening 5' 6" x 2' 7", sill 10", teak door 1 1/2" thick opening from both sides. / One to space between Poop and Bridge, wood (well protected position), opening 6' 0" x 2' 10", sill 7", 1 1/2" teak door, opening from both sides. / 3 entrances to Lounge, opening 5' 6" x 3' 6", sill 11" 9", 1 1/2" teak door in halves, opening from both sides. / Entrance to 1st Class amidships (P&S) in steel deckhouse, opening 5' 6" x 2' 7", sill 7", teak door 1 1/2" thick.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
From Fore End of Bridge to Stem:— 2 @ 7" diam.) From Fore End of) 7 @ 8" Diam.)
6 @ 10" ") Coamings Bridge to after) 6 @ 10" ")
All these vents fitted with plugs 3 @ 12" ") 36" high) 1 @ 12" ")
and covers. / 2 @ 13" ") 1/2" thick / All these vents) 2 @ 15" ")
1 @ 15" ") fitted with plugs 1 @ 18" ")
1 @ 16" ") and covers. /

One 22" exhaust vent substantial construction 200 fyffe vents from 3 1/2" to 4" diam, 24" high, all have canvas covers. /
Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
Included under "Fyffe Vents" above. /

Particulars of Gangway Cargo and Coaling Ports:—
Below Freeboard Deck:— 1 Gangway Door P&S sill 7' 6" below Freeboard Deck, opening 8' 0" x 4' 3", secured by 2" x 2" channel strongbacks, nuts and bolts. /
1 Oil-filling Door (P&S) sill 6' 0" below Freeboard Deck, opening 8' 0" x 4' 3", secured by 2" x 2" channel strongbacks, nuts and bolts. /
1 Oil-filling Door (S) sill 7' 6" below Freeboard Deck, opening 8' 0" x 4' 3", secured by 2" x 2" channel strongbacks, nuts and bolts. /
16 Air Ports (Sport and 8 Star'd) sill 4' 0" below Freeboard Deck, opening 8' 0" x 4' 3", secured by 2" x 2" channel strongbacks, nuts and bolts. /

Particulars of Scuppers and Sanitary Discharge Pipes — All discharges through ship's side below Freeboard Deck have storm valves fitted. Brass chests, and bolts, and brass valves. /

Particulars of Side Scuttles: Forecastle:— 10" diameter with deadlights. Bridge:— 16" ventilating type. /
Poop:— 2nd Class 14" ventilating type, Stewards 12" /
Main Deck:— 3rd Class (for'd) 12" vent. type with deadlights. 1st Dining Saloon 18" vent. type with plugs. 2nd Dining Saloon 16" vent. type with plugs. 3rd Dining Saloon 14" vent. type with D.L's. 1st and 2nd Accom. 14" vent. type with plugs. Engineers, Cooks etc., on Star'd side 14" ordinary pattern with plugs. /
Lower Deck (for'd):— Emergency 3rd Class 10" lights with deadlights. /

Particulars of Guard Rails:— From Fore End of Bridge to Stem:— Open rails 42" high above wood deck, 5 - 3/4" rods, stanchions 4' 6" apart 1 1/2" to 1 1/2" at bottom. /
Poop and Bridge Decks:— Open rails with 9" x 3" top rail and 4 - 3/4" rods. Stanchions 4' 6" apart, 1 1/2" to 1 1/2" at bottom. Bulwarks for 36' 0" on each side of Bridge at fore end 45" high. Teak top rail. Stiffeners 4' 6" apart. /
Boat Deck:— Open rails 45" high, 8" x 3" top rail 4 - 3/4" rods. Stanchions 4' 6" apart 1 1/2" to 1 1/2" at bottom. /

Particulars of Gangways, Lifelines, etc.:—

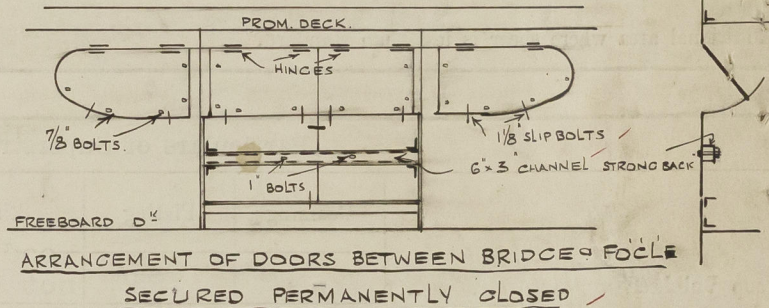
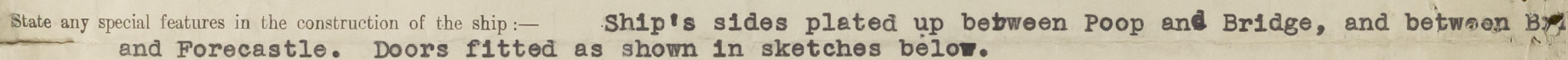
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	No Bulwarks fitted. /					
Forward Well	No Bulwarks fitted. /					

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:—
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	-	.25"	Wood Lined not sighted	2'6"	Not sighted	5'6"x2'6"	10"	8'6"
Raised Quarter Deck Bulkhead ...	-	-	-	-	-	-	-	-
Bridge, After Bulkhead	-	.25"	3x2x.25	3'6"	-	6'0"x2'0"	3"	8'6"
Bridge, Forward Bulkhead	-	.31"	3x2 1/2 x .25 L or 2 1/2 x 1 1/4 HALF ROUND	3'0"	-	5'6"x2'6"	10"	8'6"
Forecastle Bulkhead	-	.31"	3x2x.31	3'0"	-	Open passageways port and star'd.	-	8'6"
Trunk, Aft	-	-	-	-	-	-	-	-
Trunk, Forward	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	All protected.							
Exposed Machinery Casings on Super- structure Decks	All protected.							
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances37"	.31"	3x3x.31	2'3"	-	1@5'2"x3'6"	12"	8'6"
Deckhouses on Flush Deck Ships ...	-	-	-	-	-	-	-	-

Particulars of Closing Appliances (state if capable of being manipulated from both sides).		
Poop Bulkhead	Hinged Watertight Doors. /	Operable from both sides. /
Raised Quarter Deck Bulkhead	-----	
Bridge, After Bulkhead	Teak Doors 1 1/2" thick.	Opening from both sides. /
Bridge, Forward Bulkhead	Hinged Watertight Doors. 4 clips each side and one at top and one at bottom.	Operable from both sides. /
Forecastle Bulkhead	No closing appliances at after end of after end.	
Trunk, Aft	No closing appliances at after end of after end.	
Trunk, Forward	No closing appliances at after end of after end.	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	No closing appliances at after end of after end.	
Exposed Machinery Casings on Superstructure Decks	No closing appliances at after end of after end.	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	No closing appliances at after end of after end.	
Deckhouses on Flush Deck Ships	No closing appliances at after end of after end.	

A hand-drawn cross-section diagram of a ship's hull, showing internal compartments and structural details. The diagram is oriented horizontally, with the bow on the left and the stern on the right. The hull is divided into several longitudinal sections, labeled from left to right: №5 HOLD, №4 HOLD, ENGINES, DEEP TANK, BOILERS, DEEP TANK, №3 HOLD, №2 HOLD, and №1 HOLD. Above these sections, there are labels for various openings and doors: AIR PORTS, OIL FILLING DOOR, and GANGWAY DOORS. The upper part of the hull is labeled CREW and FREE BOARD. The diagram includes various lines representing the hull structure, including the deck, bottom, and internal bulkheads. There are also small rectangular shapes representing windows or ports. The drawing is done in black ink on a light-colored background.



"	Skylight at fore end "	"	"	"	"	"	"	"	"	"	"	"	24"x12"	"
"	"	aft of Engine Casing,	"	24"	to	36"	"	.	"	"	"	"	"	"
"	"	Fore end No.4 Hatch,	"	15"	"	26"	"	.	"	"	"	"	"	"
"	"	at ends of No.5 Hatch,	"	"	"	"	"	.	"	"	"	"	"	"

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