

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, <del>Sailing Ship, Tanker</del>					Port of Survey <u>Wellington, N.Z.</u>
having <u>Poop, Bridge and Forecastle.</u>					Date of Survey <u>27th July, 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.1.</u>
<u>"KAITOKE"</u>	<u>British Wellington.</u>	<u>142710</u>	<u>3166.55</u>	<u>11/1918</u>	<u>S.S. Ark No. 2-27</u>
Moulded Dimensions: Length <u>331'0"</u> Breadth <u>46'6"</u> Depth <u>25'6"</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth					
Coefficient of fineness for use with Tables					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... ..	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B)
Plating plate ... .. <u>76"</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50}$ =
Plating on exposed deck	If restricted by superstructures	Ship's Round of Beam =
$T \left( \frac{L-S}{L} \right) =$		Difference
Depth for Freeboard (D) =		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$ =

DEDUCTION FOR SUPERSTRUCTURES.				
Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..				
„ overhang ... ..				
R.Q.D. enclosed ... ..				
„ overhang ... ..				
Bridge enclosed... ..				
„ overhang aft ... ..				
„ overhang forward ... ..				
Forecastle enclosed ... ..				
„ overhang ... ..				
Trunk aft ... ..				
„ forward ... ..				
Tonnage opening aft ... ..				
„ „ forward ... ..				
Total ... ..				

Standard Height of Superstructure	
„ „ R.Q.D.	
Deduction for complete superstructure	
Percentage covered $\frac{S}{L}$ =	
„ „ $\frac{S_1}{L}$ =	
„ „ $\frac{E}{L}$ =	
Percentage from Table, Line A. (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 =	

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
... ..		1				1	
from A.P. ... ..		4				4	
„ ... ..		2				2	
amidships ... ..		4				4	
from F.P. ... ..		2				2	
„ ... ..		4				4	
... ..		1				1	
Total ... ..							

Mean actual sheer aft =	
Mean standard sheer aft =	
Mean actual sheer forward =	
Mean standard sheer forward =	
Length of enclosed superstructure forward of amidships =	
„ „ aft of „ =	

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

If limited on account of midship superstructure.

If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient
Depth to Freeboard Deck =	$\Delta =$	Depth Correction ... ..
Summer freeboard =	Tons per inch immersion at summer load water line	Deduction for superstructures ... ..
Moulded draught (d) =	T =	Sheer correction ... ..
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{\Delta}{40 T}$ inches =	Deduction = $\frac{\Delta}{40 T}$ inches =	Round of Beam correction ... ..
Addition for Winter North Atlantic Freeboard (if required) =		Correction for Thickness of Deck amidships ... ..
		Other corrections, scantlings, etc. ... ..
		Summer Freeboard =

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									
Description of Hatchway	No. 1 Cargo	No. 2 Cargo	No. 2A Cargo	No. 3 Cargo	No. 4 Cargo	ON AFTER WELL (AFTER WELL)	NO. 2A HATCH BRIDGE SPACE	TRIMMING HATCH IN BRIDGE P & S.	ESCAPE HATCHES IN BRIDGE 2 P & 2 S.
Dimensions of Hatchway	26'6 1/2" x 23'0"	26'6 1/2" x 23'0"	0-2 1/2" x 18'0"	26'6 1/2" x 23'0"	26'6 1/2" x 23'0"	3'6" x 20"	12'3" x 18'0"	5'11" x 3'0"	24' x 17 1/2"
COAMINGS	Height above Deck	28 1/2"	28 1/2"	28 1/2"	28 1/2"	30"	9"	9"	9"
	Thickness	7/16"	7/16"	7/16"	7/16"	3/8"	9 x 3 x 3/8 B.A.	9 x 3 x 3/8 B.A.	9 x 3 x 3/8 B.A.
	Sides	1/2"	1/2"	1/2"	1/2"	1/2"	9 x 3 x 3/8 B.A.	9 x 3 x 3/8 B.A.	9 x 3 x 3/8 B.A.
	Stiffeners	9 x 3/2 x 5 B.A.	9 x 3/2 x 5 B.A.	7 x 3 x 3/8 B.A.	9 x 3/2 x 5 B.A.	9 x 3/2 x 5 B.A.	9 x 3 x 3/8 B.A.	9 x 3 x 3/8 B.A.	9 x 3 x 3/8 B.A.
HATCH BEAMS	Brackets, Stays	1 AT EACH END.	1 AT FORE END.	ON SIDES NIL.	4 EACH SIDE	3 EACH SIDE	—	—	—
	Number	4	4	1	4	4	2	NIL	NIL
	Spacing	5'4"	5'4"	5'11"	5'4"	5'4"	4'1"	—	—
	Scantling and Sketch	3 1/2 x 3 1/2 x 3/8 L DOUBLE	3 1/2 x 3 1/2 x 3/8 L DOUBLE	3 1/2 x 3 1/2 x 3/8 L DOUBLE	3 1/2 x 3 1/2 x 3/8 L DOUBLE	3 1/2 x 3 1/2 x 3/8 L DOUBLE	3 1/2 x 3 1/2 x 3/8 L DOUBLE	—	—
FORE AND AFTERS	Bearing Surface	3 1/2"	3 1/2"	3 1/2"	3"	3"	—	—	—
	Number	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
	Spacing	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
	Unsupported Lengths	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
HATCH COVERS	Scantling* and Sketch	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
	Bearing Surface	—	—	—	—	—	—	—	—
	Material	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood (HINGED)
	Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"
Spacing of Cleats	How fitted	F&A	F&A	F&A	F&A	F&A	F&A	THWART	—
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	3"
	Number of Tarpaulins	3	3	3	3	3	3	3	3
	Spacing of Cleats	22"	22"	20 ends	23"	23"	24"	20" SIDES	4 3/4" BUTTERFLY NUTS & BOLTS
*Are wood fore and afters steel shod at all bearing surfaces? Fore and afters not fitted.						X			
Are battens and wedges efficient and in good condition? Yes.						X			
Are tarpaulins in good condition and in accordance with rule requirements? Yes.						X			
Are lashings provided in accordance with rule requirements? 3 fittings at each side Nos. 1, 2, 3.						X			

Particulars of fiddley, funnel and ventilator coamings:—



Funnel casing 4'1" above Bridge Deck. Fiddley casing 7'6" above Bridge Deck. One grating on each side of funnel 5'10" x 22". One grating over fiddley 12'3" x 4'6". All fitted with hinged steel flaps. Ventilator Coamings riveted to fiddley top.

Particulars of Flush Bunker Scuttles:—

Particulars of Companionways:— One on Poop Deck over Firemen's Quarters. Steel plates and angles riveted to steel deck. Wood Door at after end, 4'10" x 24". Opens from both sides. Sill 10" high.

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

FORE WELL DECK:— 3 @ 16" cowl vents. 36" coamings  
BRIDGE DECK:— 1 @ 16" " " 36" " "  
AFTER WELL DECK:— 4 @ 16" " " 36" " "  
POOP DECK:— 1 @ 9" " " 32" " "  
2 @ 5 1/2" " " 18" " "  
2 @ 9" " " 18" " "  
4 @ 12" " " 36" " "

3 @ 6" with 19" coaming.  
2 @ 9" " 19" " "  
1 @ 16" " 34" " "  
1 - 6" M.V.

All Ventilators fitted with plugs and covers.

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

FORECASTLE:— 1 @ 3 1/2" diam. 12" high to mouth.  
1 @ 6" " 10" " " "  
POOP DECK:— 1 @ 4" " 18" " " "  
2 @ 5" x 3" 6" " " "

FORE WELL:— 3 @ 2" diam. 15" high to mouth  
AFTER WELL:— 1 @ 2" " 13" " " "

Sufficient closing appliances

Particulars of Gangway Cargo and Coaling Ports:—



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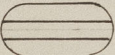
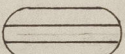
Particulars of Side Scuttles: FORECASTLE:- 4 @ 10<sup>2</sup> and 1 @ 8" each side. ✓  
BRIDGE:- 3 @ 8" on Port side aft. ✓  
POOP DECK:- 6 @ 8" on each side. ✓

All fitted with hinged deadlights. ✓

Particulars of Guard Rails :-	Bulwarks on Fore and After Wells :-	45" high, 8"x3" BA stifferers, 6'0" apart	8"x3" BA top rail.
	Bulwarks on Bridge sides :-	40" high, 6"x3½" angle stiffeners 5'0" apart	
Rails on Forecastle Head :-	39" high, 2 rails	Top 7½", bottom 3½", stanchions 1½" top to 1½" bottom	4'6" apart
" " Bridge Ends :-	42" " , 3 "	7½", others 3½", " " " "	" " " "
" " Poop :-	39" " , 2 "	7½", bottom 3½", " " " "	" " " "

Particulars of Gangways, Lifelines, etc.:—

~~Lifelines supplied in accordance~~  
~~with the regulations~~

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 ... ..	85'6"	45"	4'3"x18" 	3	17,67 s.f.	17/sq.ft.
Forward Well ... ..	85'6"	45"	4'3"x18" 	3	17.67 s.f.	17/sq.ft.

State position of each freeing port ... .. { After Well:—14'0", 42'0", 71'0" from aft end of Bridge } 18" above deck to  
(F. and A. position and height above deck edge) { Forward Well:—13'0", 43'0", 72'0" from Bridge Front, } lower edge.

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 2 horizontal bars. No doors.

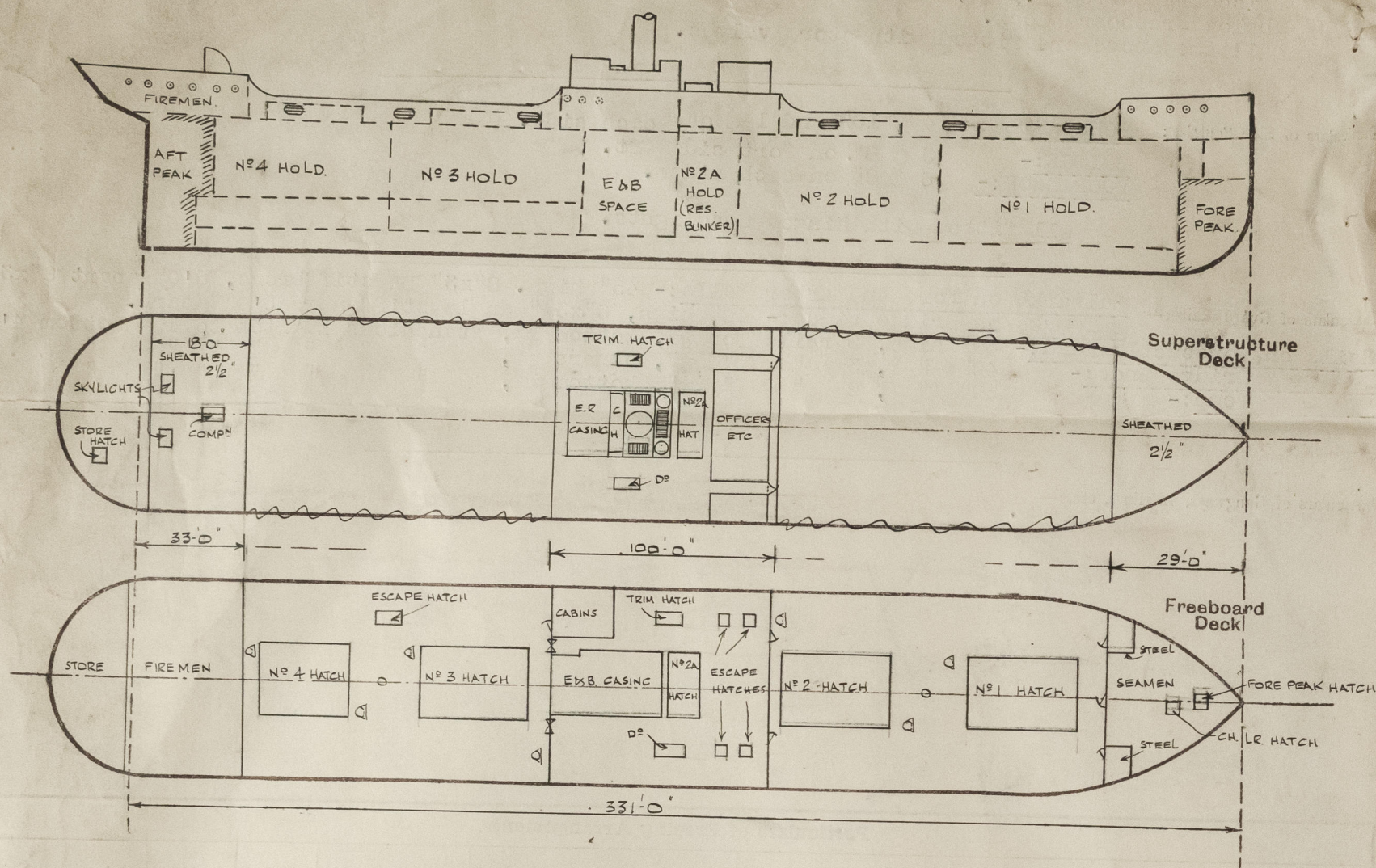
Additional area where sheer is less than standard.

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 ... ..	7/16	7/16	$\left\{ \begin{array}{l} 6 \times 3\frac{1}{2} \times \frac{7}{16} \text{ " L} \\ 8 \times 3 \text{ " BA PL 5.13 OFF C}^2 \end{array} \right.$	$\left\{ \begin{array}{l} 27 \text{ " } \\ - \end{array} \right.$	$\left\{ \begin{array}{l} \text{NONE.} \\ 23 \text{ BK TOP \& BOT 5 RV.} \end{array} \right.$	none	-	7'6" /
Raised Quarter Deck Bulkhead ...	-	-	-	-	-	-	-	-
Bridge, After Bulkhead ... ..	$\frac{1}{4}$	$\frac{1}{4}$	PLATES FLANGED 3"	3'2"	None	$\left\{ \begin{array}{l} 2 @ 5'0 \times 4'0 \text{ " } \\ 1 @ 4'4 \times 2'3 \text{ " } \end{array} \right.$	$\left\{ \begin{array}{l} 17 \text{ " } \\ 24 \text{ " } \end{array} \right.$	7'6"
Bridge, Forward Bulkhead ... ..	7/16	7/16	$\left\{ \begin{array}{l} 8 \times 3 \text{ " BA} \\ \text{PLATES FL 3" 25 STIFF} \\ \text{AT C}^8 = \text{ANGLE + REV} \\ \text{EACH } 3 \times 3 \times \frac{3}{8} \end{array} \right.$	28 to 30 $\frac{1}{2}$	19 BK. T & B $\frac{7}{16}$ TH 4R	$\left\{ \begin{array}{l} 1 \text{ P } 6 \times 15 \text{ " } \\ 2 @ 4'0 \times 2'6 \text{ " } \\ 2 @ 4'10 \frac{1}{2} \times 24 \text{ " } \\ 1 @ 4'11 \times 23 \text{ " } \end{array} \right.$	20"	7'6"
Forecastle Bulkhead ... ..	5/16	5/16	$\left\{ \begin{array}{l} \text{PLATES FL 3" 25 STIFF} \\ \text{AT C}^8 = \text{ANGLE + REV} \\ \text{EACH } 3 \times 3 \times \frac{3}{8} \end{array} \right.$	32"	None	$\left\{ \begin{array}{l} 2 @ 4'10 \frac{1}{2} \times 24 \text{ " } \\ 1 @ 4'11 \times 23 \text{ " } \end{array} \right.$	17"	7'6"
Trunk, Aft ... ..	-	-	-	-	-	-	-	-
Trunk, Forward ... ..	-	-	-	-	-	-	-	-
Exposed Machinery Casings on Fore- board or Raised Quarter Decks ...	5/16	5/16	$\left\{ \begin{array}{l} 3\frac{1}{2} \times 3\frac{1}{2} \times \frac{7}{16} \\ \text{CONTINUOUS} \end{array} \right.$	$\left\{ \begin{array}{l} 39 \text{ " IN E.R.} \\ 36 \text{ " B.R.} \end{array} \right.$	$\left\{ \begin{array}{l} \text{BKT. TOP } 15 \times \frac{5}{16} \text{ " 3 RK} \\ 30 \times \frac{9}{16} \text{ " GR. ALTERNATE} \end{array} \right.$	5'0" x 24"	18"	$\left\{ \begin{array}{l} 4'11 \text{ " BCASING} \\ 7'6 \text{ " E.R. \& FIDLE} \end{array} \right.$
Exposed Machinery Casings on Super- structure Decks ... ..	7/16	7/16	$\left\{ \begin{array}{l} 3\frac{1}{2} \times 3\frac{1}{2} \times \frac{7}{16} \\ \text{CONTINUOUS} \end{array} \right.$	$\left\{ \begin{array}{l} 39 \text{ " E.R.} \\ 36 \text{ " B.R.} \end{array} \right.$	BKTS AT TOP	$\left\{ \begin{array}{l} 1 \text{ P } 4 \text{ " IN E.R. CAS.} \\ 5'0 \times 24 \text{ " } \\ \text{NONE IN B.C.} \end{array} \right.$		7'6"
Machinery Casings within Superstruc- tures 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 ... ..	Nil.
Raised Quarter Deck Bulkhead ...	-
Bridge, After Bulkhead ... ..	One Tonnage Opening P & S 5'0" x 4'0". Port has 3" boards in channels. Star'd filled in with 4" wood except doorway 52" x 28" hinged wood door fitted. One opening to accommodation 52" x 27" steel hinged door with 3 wedge handles & slip bolt fitted. Opens from inside only.
Bridge, Forward Bulkhead ... ..	2 hinged W.T. steel doors 7/16", 9 wedge clips & jointing fitted. Opens from outside only.
Forecastle Bulkhead ... ..	2 hinged steel doors opening from both sides 1" th. 1 wood framed door, 2" framing
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	----- Opens from both sides.
Exposed Machinery Casings on Super-structure Decks ... ..	Fidley and E.R. Doors Steel .27" thick hinged. Sill 18". Opens from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	One Door (P and S) in E.R. Casing .27" th. Sill 18". Opens from both sides.
Deckhouses on Flush Deck Ships ...	****



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:—



State any special features in the construction of the ship:— 2 skylights over Poop Accommodation, 4'0"X3'0" outside. Teak Coaming 2 1/2" thick, 8" high at sides to 18" at centre. Coaming secured to steel deck by 3 1/2"x3 1/2" angle. 2 hinged flaps to each skylight, and each flap fitted with 2 - 9" bullseyes.

Vessel surveyed afloat while lying at the Railway Wharf, Wellington, New Zealand.

Builder's name and yard number Sir Raylton Dixon and Company, Ltd., No 615.

Names of sister ships Typex Type "C" Standard Vessels.

Owners UNION STEAM SHIP COMPANY OF NEW ZEALAND LIMITED, WELLINGTON.

Fee £ 11 : 18 : — Received by me