

Rpt. C.11

WRECK SECTION

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 21149
(For London Office only.)

No. 584

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Forecastle & Bridge on Shelter Deck with Luggage opening.*

Port of Survey *Newcastle on Tyne*

(Type of Superstructures.)

Date of Survey *27th June 1932.*

Ship's Name *PAKEHA.* Nationality and Port of Registry *BRITISH SOUTHAMPTON.* Official Number *131759* Gross Tonnage *7909* Date of Build *1910-8.*

Name of Surveyor *Cliphurn.*

Moulded Dimensions: Length *476.5'* Breadth *62.75'* Depth *34.4"*
Moulded displacement at moulded draught = 85 per cent. of moulded depth *18940* tons
Coefficient of fineness for use with Tables *.761*

Particulars of Classification *100A1*

*S.S. Lon No. 3-13.22 Shelter acknowledged
S.S. Lon No. 1-26*

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<i>34.33</i>	(a) Where D is greater than Table depth (D-Table depth) R =	<i>(34.37 - 31.76) 3 = + 7.83</i>	Moulded Breadth (B)	<i>62.75</i>
Stringer plate	<i>.04</i>	(b) Where D is less than Table depth (if allowed) Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	<i>= 15.06</i>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam	<i>= 12.</i>
Depth for Freeboard (D) =	<i>34.37</i>			Difference	<i>3.06</i>
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	<i>= $\frac{3.06}{4} \times \left(1 - \frac{99.547}{100} \right)$ <i>NIL</i></i>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>149.79</i>	<i>149.79</i>	<i>8'-5"</i>		<i>149.79</i>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	<i>322.46</i>	<i>322.46</i>	<i>8'-5"</i>		<i>322.46</i>
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	<i>4.25</i>	<i>2.12</i>	<i>8'-5"</i>		<i>2.12</i>
" forward ...					
Total ...	<i>476.50</i>	<i>474.37</i>			<i>474.37</i>

Standard Height of Superstructure *7.5'*
" " R.Q.D.
Deduction for complete superstructure *42"*
Percentage covered $\frac{S}{L} = 100\%$
" " $\frac{S_1}{L} = 99.547\%$
" " $\frac{E}{L} = 99.547\%$
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. *99.43%*
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required)
Deduction = *42 x .9943 = - 41.77*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>57.65</i>	1		<i>57.65</i>	<i>42.42</i>	<i>54.00</i>	1		<i>54.00</i>
$\frac{1}{2}$ L from A.P. ...	<i>25.65</i>	4		<i>102.60</i>	<i>16.00</i>	<i>24.03</i>	4		<i>96.12</i>
$\frac{2}{3}$ L " ...	<i>6.34</i>	2		<i>12.68</i>	<i>4.00</i>	<i>5.94</i>	2		<i>11.88</i>
Amidships ...		4					4		
$\frac{2}{3}$ L from F.P. ...	<i>12.68</i>	2		<i>25.36</i>	<i>12.00</i>	<i>13.20</i>	2		<i>26.40</i>
$\frac{1}{2}$ L " ...	<i>51.30</i>	4		<i>205.20</i>	<i>47.00</i>	<i>53.40</i>	4		<i>213.60</i>
F.P. ...	<i>115.30</i>	1		<i>115.30</i>	<i>108.00</i>	<i>120.00</i>	1		<i>120.00</i>
Total ...				<i>518.99</i>					<i>522.00</i>

Mean actual sheer aft = *Deficient, more than 75%*
Mean standard sheer aft = *7.5'*
1.0'
= 12"

Mean actual sheer forward = *Excess*
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = *CS.S.*
" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{3.21}{18} \left(\frac{75-50}{2} \right) = - .04$

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.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *34.37* Ft.
Summer freeboard = *5.58*
Moulded draught (d) = *28.79*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *7.20 = 7.4*

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 18764$

Tons per inch immersion at summer load water line

$T = 59.9$

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

= *7.83*

= *7.94*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{261+680}{1.36} = \frac{1.441}{1.36}$

Depth Correction ... *7.83*

Deduction for superstructures ... *41.77*

Sheer correction ... *.04*

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

Summer Freeboard = *66.98*

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

Tropical Fresh Water Line above Centre of Disc ... *15'*
Fresh Water Line " " ... *7 1/4*
Tropical Line " " ... *7 1/4*
Winter Line below " " ... *7 1/4*
Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ... *4-4'*
Fresh Water " " ... *4-11 1/4*
Tropical " " ... *4-11 3/4*
Winter " " ... *6-2 1/2*
Winter North Atlantic " " ...

PAKETHA

Particulars of Scuppers and Sanitary Discharge Pipes:—

Particulars of Side Scuttles:—

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc.:—

none.

Locking, brass fitted
to No. 14 bulldozer
at Rev. 26/2/43.

Additional Hatches:
on Bridge Deck.

None.

Escape Hatches on Fireboard deck.
 8 @ 12' x 29": 9" x 38 framing.
 Covers. 2 1/2 W.P. B. surface. 2" V. Cleats 17". 1 Turpanulin.
 Coil Hatches in Bridge space.
 6 @ 4' 8" x 2' 7": framing. 12" x 40".
 W.P. covers. 2 1/2". T. B. surface. 3". Cleats 23". 2 Turpanulins.
 Coil Hatches on Fireboard deck.
 2 @ 5' 0" x 2' - 7": framing. 9" x 40". W.P. covers. 2 1/2". B. surface 3".
 Cleats 22". 1 Turpanulin.

Innage Hatch: 4'-3" x 16'-6": Coaming 6" x 40."
2 1/2 W.P. covers: 3" Beams surface.
Hatch to 3rd T

wood plugs provided for air pipes

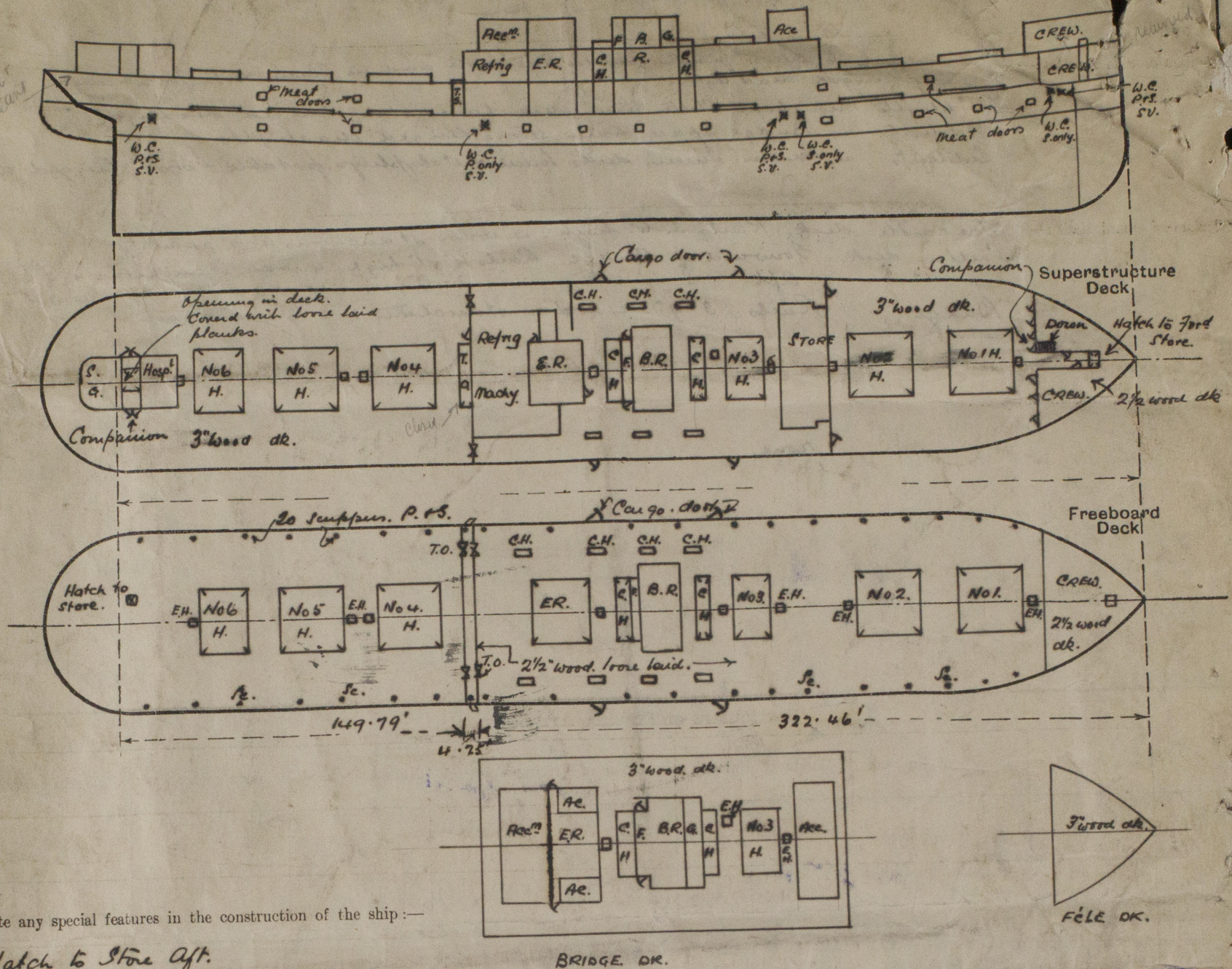
Put's have wood plugs and Candas covers.

Steel hinged w. J. doors. Rubber packed. 2'-3" x 2'-0" secured by 1" dia bolts thro' 2 strong distal strong backs. Doors about 3'-9" to 4'-3" above deck according to position in ship.

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 <i>Immage Bld.</i>	✓	30	6 x 3 x .38 Bld. + 3 x 3 x .38.	27" 32" ✓ 36"	✓	2 @ 5' 7" x 3' - 1"	16.	8' - 5"
<i>Ford Immage Bld.</i> Raised Quarter Deck Bulkhead ...	✓	30.	3 1/2 x 3 1/2 x .38. + 3 1/2" flanges.	32" ✓	✓	2 @ 5' 7" x 3' - 1"	16.	8' - 5"
Bridge, After Bulkhead ...	40	36.	3 1/2 x 3 x .38.	31" 6 33"	✓	1 @ 5' 10" x 2' 6" 2 @ 6' 0" x 5' 0"	12. 12"	8' 0"
Bridge, Forward Bulkhead ...	44	40.	6 x 3 x .42 Bld.	30" 6 36"	<i>Lugs 2 x B.</i>	2 @ 5' 0" x 3' 4"	19"	8' 0"
Forecastle Bulkhead ...		25	3 x 3 x .32	30" 6 36"	✓	4' - 9" x 2' - 1"	18"	7' 6"
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super-structure Decks ...	36 ✓	36.				2 @ 5' 7" x 2' 6" 2 @ 5' 3" x 2' 7"	14" 14"	8' 0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...		38.				2 @ 5' 4" x 2' 8" 1 @ 5' 0" x 2' 6"	18 18	8' 0"
Deckhouses on Flush Deck Ships ...								

	Particulars of Closing Appliances (state if capable of being manipulated from both sides).
Poop Bulkhead <i>Louage Aft.</i>	2 1/2" weather boards in full height channels.
<i>Forw. Louage Bulk.</i>	2 1/2" weather boards in full height channels.
Bridge, After Bulkhead	2. To Raising. <i>Single Room.</i> Steel hinged door in halves operated from Both sides.
Bridge, Forward Bulkhead	2. With 3" weather boards in full height channels.
Forecastle Bulkhead	Hinged steel w. i. doors. Rubber packed & operated from both sides.
Exposed Machinery Casings on Free-board or Raised Quarter Decks	1 1/2 Solid teak doors. operated from both sides.
Exposed Machinery Casings on Superstructure Decks	✓ <i>Steel hinged.</i>
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	2. E.R. 1 1/2" Solid teak doors operated from both sides. 2. To Raising. Ordinary steel hinged doors operated from both sides.
Decks Houses on Flush Deck Ships	Ordinary steel hinged doors operated from both sides.

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:—

Hatch to Store Aft.
On 3rd Deck.
2' 5" x 1' 11": Coaming 12" x 40.
2 1/2" W.P. cover. B. surface. 2".
Cleats 18": 1 Tarpan in.

Wash port in Tonnage space. P.S.
21" x 18": 2" from Ford Bld.
15" above deck. with hinged steel door.

A considerable number of cleats on all hatches on freeboard deck are broken or missing.

Vessel insulated in Nos. 1, 2, 4, 5 holds. and is now being fitted with insulation in No. 3 hold.

Vessel measured afloat.

Builder's name and yard number

Harland & Wolff Ltd Belfast.

Names of sister ships

Owners

Shaw Savill & Albion Co. Ltd

Fee £

15

6

Received by me

Lloyd's Register of Shipping.

Ship's Name EMPIRE PAKEHA

Official No. 131759

Memorandum of alterations reported since ship was surveyed for assignment of Load Lines in

CLOSING OF TONNAGE OPENING.

The following has now been done in accordance with Circular 1777.

The tonnage opening in the Shelter Deck, the freeing ports in the tonnage well, and all overboard scuppers from the shelter tween decks, including those in the tonnage well, have been closed in a satisfactory manner.

Suitable provision has been made for rigging lifelines which are available in all parts of the vessel which might have to be used in the regular working of the ship.

The deadlights of all side scuttles in cargo spaces below the shelter deck have been secured watertight by special vents which cannot be operated without the consent of the Master of the ship.

The Shelter Tween Decks are drained to the bilges by means of scupper pipes fitted on each side of the ship at the fore and after ends of the machinery spaces.

The Latch Coaming have been fitted with efficient horizontal stiffeners and stays.

^{on an ample basis}
The efficiency for closing Latchways and other openings on the weather deck are efficient and the vessel generally in good condition.

The doors in the ship's side have been secured watertight.

A copy of the above has been placed on board.

H.B. Johnson.

The following has been added to the Freeboard Certificate (Certified Copy).

FORECASTLE.

Nipped Steel doors.

BRIDGE FORE END.

Nipped Steel w.T. doors.

BRIDGE AFTER END.

Nipped Steel w.T. doors.

Nipped Steel door.

Two openings with Stomaboard in Rusted Channels.

H.B.