

STEEL STEAMER or MOTORSHIP.

Received at London Office 13 FEB 1935

State if Report has been sent on the Freeboard of the Vessel *Yes*State if Report is sent on the Machinery of the Vessel *Yes*

Date of completion of report 12 2 35

Port of *Glasgow*Survey held at *Glasgow*

Date First Survey 4 Dec 1933

Last Survey 8 Feb 1935

On the (State if Machinery fitted Aft and if Single, Twin or Triple Screw)

Twin Screw Motor Vessel "WAIRANGI"

(Machinery amidships)

State Type (Full Scantling, Complete Superstructure with or without Tonnage Openings)

Complete Superstructure with Tonnage opening

State Type of Erections

*Bridge & Deck*TONNAGE under Tonnage Deck... *8816.99*CLASS *+100 A1*State if with freeboard *Yes*Built at *Glasgow*

Do. of space or spaces between Tonnage Dk. and Upper Dk.

Length from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a) *L 515.0*Launched *9th October 1934* Yard No. *924 G.*

Total

Breadth (greatest moulded) *B 70.0*Builders *Harland & Wolff Ltd*Gross Tonnage *10778.56*Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c) *D 43.0*Owners *Shaw Savill & Albion Co Ltd*Register Tonnage *6537.84*1st Longitudinal Number (L x D) = *22145*

Managers

(Where necessary to be entered in Reg. Book.)

2nd Numeral L x (B + D) = *58195*

Residence

REGISTERED DIMENSIONS. FEET.

Length *516.35*Framing Depth "d," at middle of length. See Sec. 3 (1d) *19.46*Port of Registry *Southampton*Breadth *70.4*Proportions—Depth to Length—Uppermost continuous deck to top of keel $\frac{516}{43} = 11.87$ If surveyed while building, afloat, in dry dock *Yes*Depth *32.45*Do. Long Bridge to top of keel $\frac{516}{51} = 10.03$ Draught Moulded *29.52*

FRAMES, DOUBLE BOTTOM AND BEAMS.

	INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.		INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.
FRAMES, Spacing amidships	<i>34</i>		Bracket Floors, Frame		
" " from $\frac{3}{8}$ length to Collision bulkhead.....	<i>27</i>		" " Reversed Frame		
" " in peaks.....	<i>24</i>		" " Vertical Struts		
SIDE FRAMING.			Centre Girder, depth and thickness amidships <i>48 1/2 x .66</i>		
Frame Amidships, Angle, [or F	<i>9 x 38 x 32 x 32 x .54</i>		" " top Angles	<i>3 1/2 3 1/2 .62</i>	
" " Extends up to	<i>Shell Dk. & 1st plating alternately</i>		" " bottom Angles	<i>5 5 .70</i>	
Reversed Frame Amidships, Angle	<i>14 14 .044</i>		Side Girders, No. each side and thickness	<i>2 x 0 .48</i>	
" " Extends up to...	<i>3rd Dk.</i>		Margin Plate depth (excl. of flange) and thickness	<i>42 x .62</i>	
Depth of Framing Girder.....	<i>9</i>		" " Vertical Angle to Tank side Bracket abaft $\frac{1}{4}$ len. from stem	<i>6 6 .51</i>	
Frames in Uppermost Continuous 'tween Decks, Angle, [or F	<i>9 x 38 x 32 x 32 x .54</i>		" " Vertical Angle to Tank side Bracket forward $\frac{1}{4}$ len. from stem	<i>3 1/2 3 1/2 .50</i>	
" " Second 'tween Decks, Angle, [or F	<i>9 x 38 x 32 x 32 x .54</i>		" " Gussets, spacing and scantling abaft $\frac{1}{4}$ len. from stem.....	<i>Tank top corner over 6' 4" .52</i>	
" " Third (No 3) " " "	<i>9 x 58 x 32 x 32 x .54</i>		" " Gussets, spacing and scantling forward $\frac{1}{4}$ len. from stem.....	<i>Tank top 1st 1/2 ship's side .52</i>	
Framing in Peaks, Angle or [.....	<i>9 3 1/2 .42</i>		Tank Side Brackets, height above base line at toe of Frame and thickness	<i>6' 5" .51</i>	
Diameter and Spacing of Rivets through Frame and Shell Plating amidships	<i>1 1/8 @ 6" x 5 1/4"</i>		INNER BOTTOM PLATING.		
State if Frame Joggled	<i>Yes</i>		Breadth and thickness of Middle Line Strake ...	<i>60 x .60</i>	
PANTING ARRANGEMENTS (Sec. 7), state system and particulars)	<i>deep frames ship as per approved plan</i>		Thickness of remainder in Holds	<i>.52 1/2 .48</i>	
STRENGTHENING OF BOTTOM FORWARD. State Particulars	<i>Steel + intermediate frames as approved</i>		Are Rule requirements complied with regarding increases of scantlings in way of double bottom in E. & B. space and framing in O. Bunkers and Boiler Room?	<i>Yes</i>	
SINGLE BOTTOM.			BEAMS.		
Floors, Depth and thickness at mid-line in Holds			Uppermost Continuous Deck, amidships) <i>8 x 52 x 32 x 32 x .52</i>		
Height of Brackets at side above base line at toe of frame			" " in Wells, Angle, [or F	<i>(as above chiller next)</i>	
Middle Line Keelson, on Floors, Angles, [or [.....			" " in way of Bridge, Angle, [or F	<i>10 x 38 x 32 x 32 x .56</i>	
" " " Through Plate or Intercoastal Plate...)			Spacing	<i>34</i>	
" " " Foundation Plate on Floors			Second Deck, amidships, Angle, [or F	<i>10 x 40 x 32 x 32 x .56</i>	
" " " Flat Plate Keel Angles			Spacing.....	<i>34</i>	
Side Keelsons, No. each side			Third Deck, amidships, Angle, [or F	<i>12 x 44 x 32 x 32 x .60</i>	
" " thickness of Intercoastal Plate...			Spacing.....	<i>34</i>	
" " Angles			Fourth Deck, amidships, Angle, [or F	<i>10 x 40 x 32 x 32 x .56</i>	
DOUBLE BOTTOM.			Spacing.....	<i>34</i>	
Solid Floors, thickness and spacing	<i>.48 @ 34</i>		Poop Deck, Angle, [or [.....		
" " Are Frame and Reversed Frame joggled?	<i>Yes</i>		Spacing.....		
Bracket Floors, breadth and thickness at middle line.....)			Bridge Deck, Angle, [or F	<i>8 x 52 x 32 x 32 x .52</i>	
" " breadth and thickness at margin plate.....)			Spacing.....	<i>34</i>	
			Forecastle Deck, Angle, [or F	<i>10 x 36 x 32 x 32 x .56</i>	
			Spacing	<i>54 x 48</i>	

W 1158-0173 1/2

PILLARS AND DECKS.

	INCHES IN SHIP.		Any Departure from Approved Plans to be Noted.		INCHES IN SHIP.		Any Departure from Approved Plans to be Noted.
PILLARS, No. of Rows.....				Stringer Plate, breadth and thickness in way of Bridge	59	x .42	53 x .42
" in 'tween Decks, Size and Spacing.....				Thickness of Plating abreast Deck openings in way of Wells .....	.44		
" " " " " "				Thickness of Plating abreast Deck openings in way of Bridge .....	.38		
" in Holds " "				Thickness of Plating within line of openings...	.36	o .34	
" " " " " "				If Sheathed, material and thickness	✓		
Centre Line Bulkhead.				Third Deck.			
Stiffeners and Spacing.....				Stringer Plate, breadth and thickness.....	59	x .42	53 x .42
Plating, thickness of				If Plated, state thickness.....	.38		
STRINGERS AND DECKS.				Fourth Deck (No 3)			
Uppermost Continuous Deck.				Stringer Plate, breadth and thickness.....	59	x .38	53 x .38
Stringer Plate, breadth and thickness in Wells	74	x .92	.87	If Plated, state thickness .....	.34		
" " " " in way of Bridge	53	x .48		Poop Deck.			
" Angle in Wells	6	6 .87		Stringer Plate, breadth and thickness	✓		
Thickness of Plating abreast Deck openings in way of Wells .....		.68	.63	Plating, Sheathing, material and thickness ...	✓		
Thickness of Plating abreast Deck openings in way of Bridge .....		.44		Bridge Deck.			
Thickness of Plating within line of openings...	.46	o .36		Stringer Plate, breadth and thickness.....	74	x .61	.56
If Sheathed, material and thickness	P. Pl. 3" Forward			Plating, Sheathing, material and thickness ...	.53	P.P. 2 1/2"	.48
Second Deck.				Forecastle Deck.			
Stringer Plate, breadth and thickness in Wells...	59	x .48	53 x .48	Stringer Plate, breadth and thickness.....	37	x .40	
				Plating, Sheathing, material and thickness ...	.36	o 3" P. Pl.	

SHELL PLATING.

SCANTLINGS.						RIVETING.					
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES. No		BUTTS.			
	AMIDSHIPS.		FORWARD.	AFT.		State if jogged?	RIVETS.	No. OF ROWS OF RIVETS.	RIVETS.		STRAPPED OR LAPPED.
	Breadth.	Thickness.	Thickness.	Thickness.					Diam.	Spacing cr. to cr.	
	Inches.	Inches.	Inches.	Inches.			Inches.	Inches.	Inches.	Inches.	
FLAT PLATE KEEL	59	.94	.84	.90	59 x .94 - .84	Double	1" 3 7/8	Four	1"	4"	Lapped
" In way of Duck Keel.	59	1.13									
" Bble. (if any)											
BOTTOM PLATING, No. of Strakes	78 3/4	.73	.60	.59	.73 - .56	Double	1" 3 7/8	Four	1"	4"	Lapped
BILGE PLATING, No. of Strakes	67 1/2	.78	.56	.71	.73 - .56	"	1" 3 7/8	"	1"	4"	"
SIDE PLATING, No. of Strakes	107 1/2	.81	.52	.52	.71 - .52	"	7/8 3 3/5	"	7/8	3 1/2	"
UPPER DECK, Sheer-strake in Wells.....	72 1/4	.91	.52	.52	72 1/4 x .86 - .52	"	1" 3 7/8	Five	1"	4 1/2	"
UPPER DECK, Sheer-strake in Bridge ...	72 1/4	.71				"	7/8 3 3/5	Four	7/8	3 1/2	"
STRAKE BELOW Sheer-strake in Wells.....	73	.83	.52	.52	73 x .78 - .52	"	1" 3 7/8	"	1"	4"	"
STRAKE BELOW Sheer-strake in Bridge ...	73	.71				"	7/8 3 3/5	"	7/8	3 1/2	"
POOP SIDE PLATING	50 1/4					Double	7/8 3 3/5	Four	7/8	3 1/2	Lapped
BRIDGE SIDE PLATING ...	52	.69			.64	Single	3/4 3	Two	3/4	2 3/8	"
FORECASTLE SIDE PLATING			.46								

WATERTIGHT BULKHEADS.

Total No. of W.T. BULKHEADS in Vessel— <i>Eight</i>					
Extending to Upper Deck (Sec. 3 c) <i>One (Collision bulk to Shell Deck)</i>					
" Deck next below <i>Seven to 2nd BK</i>					
As per Rule <i>approved</i> <i>Eight</i>					
	Plating Thickness.	STIFFENERS.			
		VERTICAL.		HORIZONTAL.	
		Scantlings.	Spacing.	Scantlings.	Spacing.
MIDSHIP BULKHEAD, Upper tween decks					
" (2nd) " Second "		.26-.27	4 x 3 x .34 L	30	
" " Third "		.27-.31	5 1/2 x 3 x .32 L	30	
" " Holds .....		.33-.43	9 x 4 1/2 x 3 1/2 x .54	30	
COLLISION (87F). (in Hold) .....		.35-.52	8 x 3 x .42 L	24	3 Fitters
AFTER PEAK " " " "		.30-.34	8 x 3 x .34 " 5 1/2 x 3 x .32	24	

FORGINGS and CASTINGS.

	Casting or Forging.	Scantlings.	Maker's Name.	Any departure from approved plans to be noted.
KEEL, Bar	M.S.	11 x 3 7/8		
STEM <i>Forefoot</i>	C.S.	As plan	McAlloy & Co	
STERN FRAME { Propeller Post	C.S.	As approved	Messrs. J. & S. Co.	
{ Rudder "	C.S.	Do	Messrs. J. & S. Co.	
RUDDER—A+B		233 1/2 lb		
Speed of Vessel		16 Knots		
RUDDER main piece at head ...		17" dia	Messrs. J. & S. Co	
" main piece heel ...		C.S.	As approved	
" how constructed		Semi balanced	Cast frame	
" double or single plate		.62		
" coupling, vertical or horizontal.....		Vertical		

STEEL.

Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture).

Colville & Co. Ld. Lanarkshire Steel Co. & Steel Coy of Scotland

Has the Steel been tested as required by the Rules?

Yes.

EQUIPMENT No. 60739										LETTER	C't	ANCHORS.			
Number of Certificate.	Anchors.	WEIGHT, EX. STOCK			WEIGHT OF STOCK			TEST, PER CERTIFICATE.				WEIGHT REQUIRED BY TABLE 53.	Description of Anchor.	Makers.	Where and when tested and Superintendent.
		Cwts.	qrs.	lbs.	Cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Cwts.			
93696	1st Bower ...	109	2	0				71	0	0	0	10 1/2	Hingley's Challenge	H. Hingley & Sons	Neterton 30 June '34 J. A. Reef
93695	2nd „ ...	109	0	7				71	0	0	0	10 1/2	Do	Do	Do 29 June '34 Do
93697	3rd „ ...	108	3	10				70	12	2	0	89	Do	Do	Do 30 June '34 Do
	Collective weight.	327	1	17								298			
93578	Stream	31	1	0	7	3	13	29	11	1	0	31 cwt. ex stock	Ordinary 3 lb. Iron	H. Hingley & Sons	Neterton 9 th May '34 H. Green

CHAIN CABLES.

HAWSERS AND WARPS.

Number of Certificate.	Length and size supplied.		Test per Certificate.		WEIGHT OF CHAIN CABLE.			Length and size per Table 53.		Description.	Makers of Cables.	Where and when tested, and Superintendent.	Material.	Length and size supplied.		Breaking Test of Steel Wire.	Length and size per Table 53.	
	Length.	Diam.	Statutory.	Breaking.	Supplied.	Per Rule.		Length.	Diam.					Length.	Cir.		Length.	Cir.
87047	165	2 1/16	133 3/8	186 3/4	659-1-4	1		165	2 1/16	Stud Link	Hingley & Sons	Neterton 6 July 34 J. A. Reef	TOWLINE	130	6 1/2	112-3	130	6 1/2
87061	165	2 1/16	133 3/8	186 3/4	658-2-21	1		165	2 1/16	Stud Link	Do	Do 31 May 34 H. Green	HAWSERS & WARPS	4 @ 120	2 3/4	15-2	4 @ 120	2 3/4
					1317-3-25	1317												
Iron Stream Chain or Steel Wire	120	5 1/2		84-11				120	5 1/2	6/24 SW.								

Steering Gear, ~~Steam~~ Electric Hydraulic by J. Hartie & Co. Steering Gear, Hand (Two Motors)
 Boats ~~Wood~~ 2 @ 26'0" x 8'0" x 3'3" Steering Chains, Size and Test Windlass Electric by Fother & Pitt
 Ceiling in Holds, thickness and material None Cargo Battens, thickness, material and spacing ~~None~~ 6" x 2" x 1/2" @ 9"
 Cargo Hatchways.—(Upper Deck) Steel plate and angles Thickness of Hatches 2 1/2"
 Size of No. 1 Hatchway (Forward) 18'0" x 18'0" No. 2 28'4" x 18'0" No. 3 19'0" x 18'0" No. 4 19'0" x 18'0" No. 5 22'8" x 18'0" No. 6 17'0" x 18'0"
 Number of Shifting Beams and/or Fore and Afters Three, Five, Three, Three, Four, & Three respectively.

For HARLAND AND WOLFF, LIMITED.

Builder's Signature

Govan Secretary

GENERAL DECLARATION. It should be stated (a) whether the vessel is fitted for the carriage and burning of oil used as fuel Yes (b) whether the vessel, not being an oil tanker, is fitted for carrying oil as cargo No The positions in which oil is carried as fuel or cargo should be indicated, together with the flash point.

This vessel has been built in accordance with the approved plans, the Secretary's letters of various dates and in general conformity with the Society's rules.
 The workmanship and materials are good. The double bottom tanks, oil fuel bunkers and peak tanks have been tested as required by the rules. The weather decks, bulkheads & tunnel have been tested with satisfactory results, the freeboards verified and the marks cut in on the vessel's side. The bottom forward of the 1/2 length has been strengthened in accordance with the rules. Oil is carried in deep tanks at forward end of the engine room, in tanks at sides of tunnel and in Nos 3, 4, 5, 6 & 7 double bottom tanks. Section 20 of the rules have been complied with. This vessel does not hold a Board of Trade passenger Certificate. A Deck Keel has been fitted in the double bottom in way of No 3 hold.
 The following structure has been electrically welded — Lower deck stringers to shell P.T.O.

The amount of Entry Fee £ 12 : 0 : 0
 Special Survey Fee £ 459 : 14 : 9
 Travelling Expenses, if any £ : :
 Received by me, 18.2 1935

I am of opinion the Vessel should be Classed +100 A1
 With Freeboard.

State whether the Vessel has been built under Special Survey Yes.

Signature

Norman Dobson
 Surveyor to Lloyd's Register of Shipping.

Certificate to be sent to GLASGOW Date of issue 15/2/35

Committee's Minute GLASGOW 12 FEB 1935

Character assigned + 100 A1
With freeboard

2.35.

Lloyd's A & C.

+ L.M.C. 2.35.

2 SB-100A



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Lloyd's Register
 Foundation

GENERAL REMARKS—(The Surveyor should state the Number of Report and Name of any Sister Vessel. Plans showing Vessel as built should be forwarded and a List of the Plans should be embodied.)

Oil tank tops at sides of tunnel. Stiffeners and bracket connections to oil tight bulkhead
Tank margin of after double bottom tanks. Port deck guide plate to decks

List of plans herewith

- ✓ Midship Section as built (forwarded in advance)
- ✓ Midship Section
- ✓ Profile
- ✓ Decks
- ✓ Pillars & Girders (After body)
- ✓ Do (Fore body)
- ✓ Alt Column head plate No 3 Hatch
- ✓ Channel pillars in Motor Room
- ✓ Rivetting of Girders
- ✓ After Sections
- ✓ Fore end framing
- ✓ Rudder plan
- ✓ Stiffening of Bottom Ford
- ✓ Double bottom in way of Built Column
- ✓ Stern frame and boss arms
- ✓ Tank margin
- ✓ Oil fuel bunkers (Amidships)
- ✓ Modifications of Pillars & Girders in way of No 5 Hols
- ✓ Topside shell expansion
- ✓ Welding details of Oil fuel bunkers
- ✓ Hatch webs
- ✓ Bridge side Doors
- ✓ Stern frame & Boss arms (See later plan)
- ✓ Main Engine Seating
- ✓ Duct Keel
- ✓ Pumping Arrangements
- ✓ Forged Steel Tiller
- ✓ Oil fuel bunkers

✓ Ships side doors

Sister Vessels.

Harland & Wolff Belfast Nos 922 & 3

Forging & Casting Certificates of Tiller, Rudder frame & head, Stern post, propeller brackets, Stern forefoot

Particulars of Drop Test of Cast Steel Anchors, viz. :— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	1st Bower	70 - 3 - 14	T.R.M.F.	No 4716	28-3-34.
	2nd "	69 - 1 - 19	R.L.	No 3687	5-1-34
	3rd "	69 - 1 - 3	T.R.M.F.	No 4727	28-3-34.

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop ✓ ft., R.Q.D. ✓ ft., Bridge 195'-6" ft., Forecastle 64'-6" ft.
(in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated

Duct Keel in way of No 3 Hols

No. and Material of Decks (this information is to be given as it should appear in the Register Book) 2 Dk. Steel, 4th Dk. in No 3 Hols.

Official No. 163660 ; Signal Letters Is bottom of Vessel coated with cement No if not give particulars of composition Cement washed where no oil fuel. Cement in water course PK Cem.

PARTICULARS OF WATER BALLAST.—

Where Fitted.	*Length. Feet.	Water Capacity. Tons.	Where Fitted.	*Length. Feet.	Water Capacity. Tons.
Double bottom, aft,	65'-2"	102	Fore peak tank,	30'-9"	122
Double bottom, under Engines and Boilers,			After peak tank,	21'-10"	171
Double bottom, if under Engines only,	68'-0"	409	Deep tanks aft, at sides of tunnel (in comm. D. B)	51'-0"	893
Double bottom, if under Boilers only,			Deep tanks forward, end of E. Room	22'-8"	1078
Double bottom, forward,	244'-3"	1009	Other tanks, if fitted,		
(Cofferdam between Nos 2 & 3 tanks 2'-10")			(If necessary, furnish further information by sketch.)		
Total length of double bottom = 380'-3"		1520			

Order for Special Survey No. 6176

Date 24. 11. 33

Dates of Surveys held while building

1933 Dec. 4. 8. 12. 13. 21. 22 (1934) Jan. 10. 12. 15. 16. 17. 18. 23. 24. 26. 29. 30. 31 Feb. 2. 5. 6. 7. 12. 14. 22

26. 27. 28 Mar. 1. 2. 5. 6. 8. 12. 14. 18. 21. 22. 26. 28. 29 Apr. 3. 4. 6. 10. 16. 17. 18. 20. 24. 26 May 3. 7. 9

11. 15. 17. 25. 30 June 4. 5. 6. 8. 12. 13. 22. 26. 28 July 4. 5. 6. 9. 24. 26. 27 Aug. 3. 8. 6. 9. 10

14. 16. 20. 23. 24. 27. 29. 30 Sep. 3. 4. 6. 7. 12. 19. 26 Oct. 1. 5. 9. 16. 25. 27 Dec 3. 14. 17. 18. 20. 24

28 (1935) Jan. 9. 15. 18. 23 Feb 8

Total No. of Visits 113