

STEEL STEAMER ~~or MOTORSHIP~~

-8 FEB 1933

Received at London Office

State if Report has been sent on the Freeboard of the Vessel YESState if Report is sent on the Machinery of the Vessel YESDate of completion of report 3<sup>RD</sup> JANUARY 1933 Port of GREENOCK No. 19510Survey held at PORT GLASGOW Date First Survey 10<sup>TH</sup> MARCH 1932 Last Survey 2<sup>ND</sup> FEBRUARY 1933On the (State if Machinery fitted Aft and if Single, Twin or Triple Screw) SINGLE SCREW "HARDINGHAM"

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

FULL SCANTLINGState Type of Erections POOP, BRIDGE & FORETONNAGE under Tonnage Deck... 4948.29CLASS X100A1State if with freeboard as condition of Class NoBuilt at PORT 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 425.0Launched 15<sup>TH</sup> DECEMBER 1932 Yard No. 858

Breadth (greatest moulded)

B 56.0Builders LITHGOWS LIMITEDTotal 4948.29

Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c)

D 28.75Owners WILLIS STEAMSHIP COMPANY LIMITEDGross Tonnage 5414.711st Longitudinal Number (L x D) = 12218.75Managers J & C HARRISON, LTD.

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

Register Tonnage 3208.262nd Numeral L x (B + D) = 36018.75Residence 66 MARK LANE LONDON

## REGISTERED DIMENSIONS.

FEET.

Length 428.0Breadth 56.25Depth 26.0

Framing Depth "d," at middle of length. See Sec. 3 (1d)

24.52

Proportions—Depth to Length—Uppermost continuous deck to top of keel

14.78

Do. Long Bridge to top of keel

11.25

Draught Moulded

24'-7 1/2"Port of Registry LONDON

If surveyed while building, afloat, or in dry dock

BUILDING, AFLOAT & IN DRY DOCK.

## 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	27 1/2"		Bracket Floors, Frame	5. A. 3 1/2" 38	
" " from 3/4 length to Collision bulkhead	27"		" " Reversed Frame	5. B. 3 1/2" 38	
" " in peaks	24"		" " 2 CHANNEL Vertical Struts	10 x 3 1/2" x 3 1/2" 42	
DE FRAMING.			" " 1. B. A. 5 1/2" 3 1/2" 38		
Frame Amidships, Angle, E or C	N.B.S. 12 3 1/2" 56		Centre Girder, depth and thickness amidships	47	48
" " Extends up to	UPPER DECK		" " top Angles	3 3 50	
DEEP FRAMING FORWARD			" " bottom Angles	4 4 56	
Reversed Frame Amidships, Angle, CHANNEL	12 x 4 x 4 x 50	See letter from 9/6 13/2/33	Side Girders, No. each side and thickness	1 2 38	
" " Extends up to	UPPER DECK		Margin Plate depth (excl. of flange) and thickness	44	50
Depth of Framing Girder	12"		" " Vertical Angle to Tank side	5 5 44	
Frames in Uppermost Continuous Decks, Angle, E or C	6 3 1/2" 36		" " Bracket abaft 1/2 len. from stem	6 6 44	
" " Second Tween Decks, Angle, E or C	EVERY FRAME		" " Vertical Angle to Tank side	6 6 44	
" " Third " " " "			" " Bracket forward 1/2 len. from stem		
Framing in Peaks, Angle or C	N.B.S. 7 1/2 3 1/2" 37		" " Gussets, spacing and scantling abaft 1/2 len. from stem	39 EVERY FRAME	
Diameter and Spacing of Rivets through Frame and Shell Plating amidships	7/8" R 2 6 1/4"		" " Gussets, spacing and scantling forward 1/2 len. from stem	39 EVERY FRAME	
State if Frame Joggled	YES		Tank Side Brackets, height above base line at toe of Frame and thickness	6-2" x 44	
FRAMING ARRANGEMENTS (Sec. 7), state system and particulars	DEEP FRAME SYSTEM WITH 4 SIDE STRINGERS BELOW UPPER DECK AS APPR		INNER BOTTOM PLATING.		
STRENGTHENING OF BOTTOM FORWARD. State Particulars	5 x 5 x 42 FRAMES WITH 2 ROWS RIVETS & ADDITIONAL INTER GIRDERS FOR 9/5 1/4" LTH AS APPR		Breadth and thickness of Middle Line Strake	78" 47	
DOUBLE BOTTOM.			Thickness of remainder in Holds	42	
Floors, Depth and thickness at mid-line in Holds			Are Rule requirements complied with regarding increases of scantlings in way of double bottom in E. & B. space and framing in Bunkers and Boiler Room?	E.S. 60 50 B.S. 67 56	
Height of Brackets at side above base line at toe of frame			BEAMS.		
Middle Line Keelson, on Floors, Angles, E or C			Uppermost Continuous Deck, amidships in Wells, Angle, E or C	11 3 1/2" 44	
" " Through Plate or Intercostal Plate			" " in way of Bridge, Angle, E or C	11 3 1/2" 51	
" " Foundation Plate on Floors			" " Spacing	EVERY FRAME	
" " Flat Plate Keel Angles			Second Deck, amidships, Angle, E or C		
Side Keelsons, No. each side			" " Spacing		
" " thickness of Intercostal Plate			Third Deck, amidships, Angle, E or C		
" " Angles			" " Spacing		
DOUBLE BOTTOM.			Fourth Deck, amidships, Angle, E or C		
Solid Floors, thickness and spacing	39 EVERY 2ND		" " Spacing		
" " Are Frame and Reversed Frame joggled?	YES		Poop Deck, Angle, E or C	7 3 34	
Bracket Floors, breadth and thickness at middle line	32" 39		" " Spacing	EVERY FRAME	
" " breadth and thickness at margin plate	32" 39		Bridge Deck, Angle, E or C	N.B.S. 9 3 1/2" 40	
			" " Spacing	EVERY FRAME	
			Forecastle Deck, Angle, E or C	N.B.S. 8 3 48	
			" " Spacing	EVERY FRAME	

PILLARS AND DECKS.			
	INCHES IN SHIP.	Any Departure from Approved Plans to be Noted.	
<b>PILLARS, No. of Rows.....</b>			
" in between Decks, Size and Spacing.....			
" " " " " "			
" in Holds " " "			
" " " " " "			
<b>Centre Line Bulkhead. HOLDS</b>			
Stiffeners and Spacing.....	11 x 3 1/2 x .54 B.A.	2 5 1/2	
Plating, thickness of			
D <sup>2</sup> BRIDGE SPACE 5 x 3 x .31 ANGLE	PLATING	3 7/8 .31	.30 .26
<b>UPPERMOST AND DECKS.</b>			
<b>Uppermost Continuous Deck.</b>			
Stringer Plate, breadth and thickness in Wells	5 1/2	1-30 AFT 1-21 FWD	1-18 AFT 1-10 FWD
" " " " in way of Bridge	6 0 x 1 1/2 x 1/2	1/2	1/2
" Angle in Wells	6 6	7/8	
Thickness of Plating abreast Deck openings in way of Wells	2-21 FWD 2-28 AFT	1/2	1/2
Thickness of Plating abreast Deck openings in way of Bridge	2-28 CROSSING 1 IN WALLS 1 IN BRIDGE	1/2 1/2 1/2	1/2 1/2 1/2
Thickness of Plating within line of openings...			
If Sheathed, material and thickness			
<b>Second Deck.</b>			
Stringer Plate, breadth and thickness in Wells...			
Stringer Plate, breadth and thickness in way of Wells			
Thickness of Plating abreast Deck openings in way of Wells			
Thickness of Plating abreast Deck openings in way of Bridge			
Thickness of Plating within line of openings...			
If Sheathed, material and thickness			
<b>Third Deck.</b>			
Stringer Plate, breadth and thickness.....			
If Plated, state thickness.....			
<b>Fourth Deck.</b>			
Stringer Plate, breadth and thickness.....			
If Plated, state thickness			
<b>Poop Deck.</b>			
Stringer Plate, breadth and thickness.....	36"	1/2	36" x 1/2
Plating, Sheathing, material and thickness	26 SHEATHING	1/2	26" x 1/2
<b>Bridge Deck.</b>			
Stringer Plate, breadth and thickness.....	58"	1/2	58" x 1/2
Plating, Sheathing, material and thickness	59" x 1/2	1/2	59" x 1/2
<b>Forecastle Deck.</b>			
Stringer Plate, breadth and thickness.....	35"	1/2	35" x 1/2
Plating, Sheathing, material and thickness		1/2	34"

SCANTLINGS.					RIVETING.							
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES. State if Joggled? <i>ORDINARY.</i>			BUTTS.			
	AMIDSHIPS.		FORWARD.			SINGLE OR DOUBLE.	RIVETS.		No. of ROWS OF RIVETS.	RIVETS.		STRAPPED OR LAPPED.
	Breadth.	Thickness.	Thickness.	Thickness.			Diam.	Spacing or. to cr.		Diam.	Spacing or. to cr.	
	Inches.	Inches.	Inches.	Inches.		Inches.	Inches.		Inches.	Inches.		
FLAT PLATE KEEL .....	49"	7/8"	68"	68"		DOUBLE	7/8"	34"	4R - 3R	1"	4"	LAPPED.
" <del>Double</del> (if any)	12"	60"										
BOTTOM PLATING, No. of Strakes .....	32"	61"	60"	44"	46 FORWARD	"	"	"	3R	7/8"	3 1/2"	"
BIDGE PLATING, No. of Strakes .....		61"	60"	44"	46 FORWARD	"	"	"	"	"	"	"
SIDE PLATING, No. of Strakes .....		60"	69"	44"	44 FORWARD	"	"	"	"	"	"	"
UPPER DECK, Sheer-strake in Wells.....	80"	1'02" AFT 1'04" FORWARD	44"	44"		"	1"	3'9"	4R - 3R	1 1/8"	5"	"
UPPER DECK, Sheer-strake in Bridge ...		60"				"	7/8"	3'4"	3R	7/8"	3 1/2"	"
STRAKE BELOW Sheer-strake in Wells.....		66" AFT 72" FORWARD	58"	44"	FOR 60 - 44"	"	1"	3'9"	3R	"	"	"
STRAKE BELOW Sheer-strake in Bridge ...		60"				"	7/8"	3'4"	3R	"	"	"
POOP SIDE PLATING .....			38"			SINGLE	3/4"	3'0"	1R	3/4"	2 5/8"	"
BRIDGE SIDE PLATING ...		60"				DOUBLE	7/8"	3'4"	3R	7/8"	3 1/2"	"
FORECASTLE SIDE PLATING			48"			SINGLE	3/4"	3'0"	1R	3/4"	2 5/8"	"

<b>Total No. of W.T. BULKHEADS in Vessel—</b> 7		Extending to Upper Deck (Sec. 3 c) 7		" Deck next below ✓		As per Rule 7 ✓	
		<b>STIFFENERS.</b>					
	Plating Thickness.	VERTICAL.		HORIZONTAL.			
		Scantlings.	Spacing.	Scantlings.	Spacing.		
<b>MIDSHIP BULK'D.</b>	Upper tween decks						
"	" <del>Second</del> "						
"	" <del>Third</del> "						
"	" Holds .....	45-26	12-8 1/2 x 24 x 11 1/2 x 78 1/2 x 88 A	29-30"			
<b>COLLISION</b>	" (in Hold) .....	50-26	7 x 3 x 16 B. A.	24	25 MILD BEAMS		
<b>AFTER PEAK</b>	" .....	49-30	7 x 3 x 34 B. A.	24	25 MILD BEAMS		
					TUNNEL KEEPS		

		Casting or Forging.	Scantlings.	Maker's Name.	Any departure from approved plans to be noted.
<b>KEEL, Bar</b> .....					
<b>STEM</b> .....	Forging.	9 1/2 x 22		T.S. FOSTER & SONS L <sup>td</sup>	
<b>STERN FRAME</b> {	Propeller Post .....	"	10 1/2 x 7 1/2	DENNYSTON	
	Rudder .....	"	13 x 8 1/2	FORGE CO <sup>l</sup>	
<b>RUDDER—A x D.</b> .....				TWIN TYPE RUDDER.	
<b>Speed of Vessel</b> .....	11 K.			10 1/2 UPPER STERN.	
<b>RUDDER</b> mainpiece at head ...	Forging.	12 1/2		N. SONS	
" " heel ...		9		L <sup>td</sup>	
" how constructed .....				BUILT FORGING	
" double or single plate				SINGLE PLATE 93	
" coupling, vertical or horizontal .....				HORIZONTAL.	

STEEL.	Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture)			OPEN HEARTH PROCESS.
	COLVILLES LTD.	STEEL COMPANY OF SCOTLAND.	LANARKSHIRE STEEL CO. LD.	STENARTS & LLOYDS LTD
	FRODINGHAM IRON & STEEL WORKS.			
	Has the Steel been tested as required by the Rules?			YES.

EQUIPMENT No 38724										LETTER a		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.
#6780	1st Bower	69	1	0	Stockless.			53	7	2	0	68	BRITANNIC	R. SYKES & SONS L <sup>d</sup>	Cardiff Heath 30.5.32
#6841	2nd "	67	3	14 1/2	"			52	12	2	0	68	D <sup>o</sup>	D <sup>o</sup>	D <sup>o</sup> 15.8.32
#6842	3rd "	59	0	14	"			47	16	2	7	58 1/2	D <sup>o</sup>	D <sup>o</sup>	D <sup>o</sup> 15.8.32
	Collective weight.	196	1	0							194 1/2				
#6775	Stream	19	2	18	5	0	0	20	8	1	21	19	ORDINARY	D <sup>o</sup>	D <sup>o</sup> 30.5.32

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.		Supplied.	Per Rule.	Length.	Diam.	Length.	Cir.					Length.	Cir.		Length.	Cir.	
35619	270	2 5/8	96 1/2	134 3/4	729-0-0	720 3/4	270	2 5/8	270 LNK.	R. SYKES & SONS L <sup>d</sup>	Cardiff 30.5.32 L.L. WRIGHT.	TOWLINE...	120	4 1/4	64'6	120	4 1/4		
												HAWSERS & WARPS	2290	3 1/4	21'1	2290	2 3/4		
												"	2290	2 1/2	14'7	2290	2 1/2		
												"	2290	3"	25'7	✓	✓		
1st Stream 2nd Stream 3rd Steel Wire	90	5	70 9	✓			90	5	9.5 H.										

RETAIN

Steering Gear, Steam	BY HASTIE & CO, GREENOCK.	Steering Gear, Hand	BY RELIEVING TACKLE TO PROP WINCH.
Boats	2 LIFEBOATS & 2 GIGS.	Steering Chains, Size and Test	TELENOTOR GEAR.
		Windlass	STEAM BY EMERSON WALKER L <sup>d</sup>
Ceiling in Holds, thickness and material	2 1/2" N.P. THROUGHOUT HOLDS. ✓	Cargo Battens, thickness, material and spacing	2 1/2" N.P. SPACED 9" APART IN HOLDS & BRIDLE SPACE. ✓
Cargo Hatchways, (Upper Deck)	STEEL COAMINGS & ANGLES.	Thickness of Hatches	3" SOLID COVERS. ✓
Size of No. 1 Hatchway (Forward)	29'3" x 24'0" No. 2 32'1" x 20'0" No. 3 20'11'5 1/2" x 20'0" No. 4 26'8" x 20'0" No. 5 32'1" x 24'0" No. 6 ✓		
Number of Shifting Beams and/or Fore and Afters	6 BEAMS IN N <sup>o</sup> 1, 2, & 5 HATCHES; 1 BEAM IN EACH N <sup>o</sup> 3 HATCH; 7 BEAMS IN N <sup>o</sup> 4 HATCH; ✓		

FOR LITHGOWS LIMITED.

Builder's Signature *R. Campbell*

This vessel has been built in accordance with the Approved Plans and in general conformity with the Society's Rules for the class contemplated.  
The workmanship & materials are of good quality.  
All the Double Bottom Tanks, the Fore Peak Tank, & the After Peak Tank were tested in accordance with Rule requirements & found satisfactory.  
The weather decks; Shaft tunnel; W.T. bulkheads; & Chain locker were also tested & found satisfactory.  
The Freeboards were verified & the marks cut in on vessel's sides.

The amount of Entry Fee ..... £ 9 : 0 : 0 } Fees applied for,  
3<sup>rd</sup> FEBRUARY 1933  
Special Survey Fee.... £ 335 : 7 : 6 } Received by me,  
7.2.1933  
FREEBOARD  
Travelling Expenses if any £ 16 : 0 : 0  
DAMAGE FEE 5 : 5 : 0  
EXPENSES. 7 : 0 : 0  
State whether the Vessel has been built under Special Survey ☒ YES  
H.M. via Gls  
Certificate to be sent to GREENOCK. Date of issue 22/2/33  
Committee's Minute GLASGOW 7 FEB 1933  
Character assigned +100A1  
2.33  
Lloyds A.O.C.P.  
+L.M.C. 2.33.28.  
Exhaust Turbine driving steam compressor.

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.)

This is a sister vessel to the "HARLINGEN" Ssk First Entry Report No 19497.

List of Plans.

Midship Section; Profile & Decks; Stern Frame; Rudder; Bulkhead; Punting Arrangements; Strengthening in Double Bottom forward; Hatch-end Beams; Nos 2 & 3 Hatch-side Beamings; Cargo Hatches; Cruiser Stern; Profile showing W. T. Bulkheads; Bridge-end Strengthening; Tunnel; Bunkers; Pumping Arrangements; Midship Section, & Profile and Decks (as built).

Forging Reports :- Stern Frame; Rudder; Stem; Quadrant:

Damage Repairs

Damage stated to have been caused between 15<sup>th</sup> December 1932 and 30<sup>th</sup> December 1932 when fitting out at Finnieston Quay, Glasgow.

How done.

Vessel placed in dry dock, bottom examined, found or put in good condition, & painted.

Shell Plating (Port Side) Plates numbered from aft.

F7 Renewed. E7 Renewed. After length of Bilge Keel removed for access in effecting repairs & refitted. Ceiling & Sparring removed as necessary and refitted.

Double Bottom Tanks Nos 5 & 6 tested on completion of repairs & found satisfactory.

Shell Plates clear of double bottom hose tested. All disturbed work repainted, & cementing in double bottoms & bilges made good.

R. L.

Particulars of Drop Test of	1st Bower	WEIGHT HEAD & PIN. #2 2 8	SURV INIT <sup>s</sup> K. H.	NO CERTIFICATE 9559	DATE OF TEST. 24.2.32.
Cast Steel Anchors, viz. :-					
Weight, Surveyor's Initials,	2nd "	42 1 22	N. B.	9539	28.1.32
Number of Certificate, Date	3rd "	36 0 10	N. B.	9768	20.7.32.
of Test.					

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 40.66 ft., R.Q.D. ✓ ft., Bridge 270.2 ft., Forecastle 37.88 ft.  
(in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated ✓

No. and Material of Decks (this information is to be given as it should appear in the Register Book) 1 OK (STL) ✓

Official No. 163310 : Signal Letters Is bottom of Vessel coated with cement YES. if not give particulars of composition BOTTOM WHOLLY CEMENTED THROUGHOUT.

PARTICULARS OF WATER BALLAST.—

Where Fitted.	Length. Feet.	Water Capacity. Tons.	Where Fitted.	Length. Feet.	Water Capacity. Tons.
Double bottom, aft,	135.21	453	Fore peak tank,		167
Double bottom, under Engines and Boilers,	25.2	132	After peak tank,		240
Double bottom, if under Engines only,			Deep tank, aft,		
Double bottom, if under Boilers only, DRY TANK (N.T. Comp <sup>d</sup> )	16.04		Deep tank, forward,		
Double bottom, forward,	189.08	824	Other tanks, if fitted,		
	Total capacity of double bottom	1409	(If necessary, furnish further information by sketch.)		

\* The wells are not to be included in the lengths of the tanks.

Order for Special Survey No. 3332

Date 14<sup>th</sup> December, 1931

Dates of Surveys held while building

(1932) Mar. 10. 14. Apr. 5. 13. 21. 27. 28. May 2. 9. 11. 16. 18. 26. 27. 31. June 2. 7. 11. 16. 21. 23. 28. July 12. 14. 19. 21. 26. 28. Aug. 1. 3. 5. 9. 11. 16. 24. 30. Sept. 1. 6. 8. 13. 15. 21. 23. 27. 29. Oct. 4. 5. 7. 10. 12. 14. 18. 21. 25. 27. 31. Nov. 2. 4. 9. 11. 15. 16. 18. 22. 25. 29. Dec. 1. 2. 5. 7. 8. 9. 12. 13. 15. 26. (1933) Jan. 19. 24. 26. 27. 31. Feb. 2.

Total No. of Visits 82.

For S.C.O.F. see G.P.R. rep. No. 19442 S.S. Harborough