

## STEEL STEAMER or MOTORSHIP.

Received at London Office.. 26 NOV 1933

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 24<sup>th</sup> NOVEMBER 1933 Port of GREENOCK No. 19662  
Survey held at PORT GLASGOW Date First Survey 25<sup>th</sup> JANUARY 1933 Last Survey 23<sup>rd</sup> NOVEMBER 1933On the (State if Machinery fitted Aft and if Single, Twin or Triple Screw) SINGLE SCREW "HARCALO"State Type (Full Scantling, Complete Superstructure with or without Tonnage Openings) FULL SCANTLING State Type of Erections POOP, BRIDGE & FOCETONNAGE under 4529.81 CLASS \*100 A State if with freeboard as condition of Class No Built at PORT GLASGOWDo. 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 415.0 Launched 18<sup>th</sup> OCTOBER 1933 Yard No. 863Total 4529.81 Breadth (greatest moulded) B 56.0 Builders LITHGOWS LIMITEDGross Tonnage 5081.47 Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c) D 27.25 Owners NATIONAL STEAMSHIP COMPANY LIMITEDRegister Tonnage 3033.09 1st Longitudinal Number (L x D) = 11308.75 Managers J & C HARRISON, LTD.  
(Where necessary to be entered in Reg. Book.)REGISTERED DIMENSIONS. FEET. Residence LONDONLength 418.0 Framing Depth "d," at middle of length. See Sec. 3 (1d) 23.09 Port of Registry LONDONBreadth 56.25 Proportions—Depth to Length—Uppermost continuous deck to top of keel 15.23 If surveyed while building, afloat, or in dry dockDepth 24.6 Draught Moulded 23-9 1/2 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	26 1/2	✓	Bracket Floors, Frame	B.A. 6 3 1/2 37	✓
" " from 3/4 length to Collision bulkhead	26 1/2	✓	" " Reversed Frame	B.A. 5 3 42	✓
" " in peaks	24	✓	" " Vertical Struts { 2 CHANNEL 1 B.A. 9 x 3 1/2 x 3 1/2 5 3 42	✓	
DE FRAMING.			Centre Girder, depth and thickness amidships	46 46	✓
Frame Amidships, Angle, E or F N.B.S.	12" 3 1/2 45	✓	" " top Angles	3 3 50	✓
" " Extends up to	UPPER DECK	✓	" " bottom Angles	4 4 55	✓
DEEP FRAMING FORWARD.			Side Girders, No. each side and thickness	1 2 38	✓
Reversed Frame Amidships, Angle CHANNEL REV ANG	12 x 4 x 4 x 44 5 4 46	✓	Margin Plate depth (excl. of flange) and thickness	44 49	✓
" " Extends up to	UPPER DECK	✓	" " Vertical Angle to Tank side Bracket abaft 1/2 len. from stem DEEP FRAMING	5 5 43	✓
Depth of Framing Girder	12	✓	" " Vertical Angle to Tank side Bracket forward 1/2 len. from stem AT DEEP FRAMING	6 6 43	✓
Frames in Uppermost Continuous 'tween Decks, Angle, E or F	6 3 1/2 30 5 1/2 x 3 1/2 x 34	✓	" " Gussets, spacing and scantling abaft 1/2 len. from stem	38 CONT'S PLATE	✓
" " Second 'tween Decks, Angle, E or F			" " Gussets, spacing and scantling forward 1/2 len. from stem	38 " " "	✓
" " Third " " "			Tank Side Brackets, height above base line at toe of Frame and thickness	74 43	✓
Framing in Peaks, Angle or F N.B.S.	7 3 1/2 41	✓	INNER BOTTOM PLATING.		
Diameter and Spacing of Rivets through Frame and Shell Plating amidships	7/8 R 2 68	✓	Breadth and thickness of Middle Line Strake	78 46	✓
State if Frame Joggled	YES	✓	Thickness of remainder in Holds	" 41	✓
FRAMING ARRANGEMENTS (Sec. 7), state system and particulars	DEEP FRAME SYSTEM WITH 4 SIDE STRINGERS AS APPROVED.	✓	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? YES	E.S. 59 49 B.S. 67 56	✓
STRENGTHENING OF BOTTOM FORWARD. State Particulars	5 x 5 x 40 FRAMES TO FLOORS FORWARD OF 1/2 LTH FORWARD, AND ADDITIONAL INTER GIRDERS AS APPROVED.	✓	BEAMS.		
ANGLE BOTTOM.			Uppermost Continuous Deck, amidships in Wells, Angle, E or F	10 3 1/2 38 43	✓
Floors, Depth and thickness at mid-line in Holds			" " in way of Bridge, Angle, E or F	11 3 1/2 52	✓
Height of Brackets at side above base line at toe of frame			Spacing	EVERY FRAME	✓
Middle Line Keelson, on Floors, Angles, E or F			Second Deck, amidships, Angle, E or F		
" " Through Plate or Intercoastal Plate			Spacing		
" " Foundation Plate on Floors			Third Deck, amidships, Angle, E or F		
" " Flat Plate Keel Angles			Spacing		
Side Keelsons, No. each side			Fourth Deck, amidships, Angle, E or F		
" " thickness of Intercoastal Plate			Spacing		
" " Angles			Poop Deck, Angle, E or F N.B.S.	7 3 30	✓
DOUBLE BOTTOM.			Spacing	EVERY FRAME	✓
Solid Floors, thickness and spacing	38 EVERY 2ND	✓	Bridge Deck, Angle, E or F N.B.S.	9 3 1/2 50	✓
" " Are Frame and Reversed Frame joggled?	YES	✓	Spacing	EVERY FRAME	✓
Bracket Floors, breadth and thickness at middle line	31 38	✓	Forecastle Deck, Angle, E or F N.B.S.	8 1/2 3 42	✓
" " breadth and thickness at margin plate	31 38	✓	Spacing	EVERY FRAME	✓



PILLARS AND DECKS.					
	INCHES IN SHIP.			Any Departure from Approved Plans to be Noted.	
<b>PILLARS, No. of Rows.....</b>					
" " " " " "					
" " " " " "					
" " " " " "					
" " " " " "					
<b>Centre Line Bulkhead.</b>					
Stiffeners and Spacing.....	HOLDS 11 x 3 1/2 x 40 BA W 53"				
" " " " " "	" " IN BRIDGE SPACE 5 x 3 x 31 ANG W 53"				
Plating, thickness of .....	HOLDS.....	37 1/2	- '30 -		
" " " " " "	" " BRIDGE SPACE.....	'31	- '26 -		
<b>STRINGERS AND DECKS.</b>					
<b>Uppermost Continuous Deck.</b>					
Stringer Plate, breadth and thickness in Wells	54" x 1'28 FORB 57 x 1'36 AFT		1'16 FORB 1'24 AFT		
" " " " " " in way of Bridge	60	'41	'39		
" " Angle in Wells .....	6 x 6 x 7 1/4 FORB 6 x 6 x 80 AFT				
Thickness of Plating abreast Deck openings in way of Wells .....	1'10 & 1'08 FORB 1'18 AFT		1'00 FORB 1'07 AFT		
Thickness of Plating abreast Deck openings in way of Bridge .....	'39 x '46 IN BRIDGE '35 IN WALLS '42		'37 x '44 '33 '40		
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 Bridge .....					
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 .....	38" x 35" x 42"				
Plating, Sheathing, material and thickness .....	36 UNSHEATHED 26 WITH 5" 2 1/2 B.C.				
<b>Bridge Deck.</b>					
Stringer Plate, breadth and thickness.....	57" x 74"		'62		
Plating, Sheathing, material and thickness .....	62" x 57"		'52		
<b>Forecastle Deck.</b>					
Stringer Plate, breadth and thickness.....	34" x 38"		'35		
Plating, Sheathing, material and thickness .....			'37		'34

SCANTLING.										RIVETING.					
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES. State if jogged? <u>ORDINARY</u> .			BUTTS.						
	AMIDSHIPS.		FORWARD.	AFT.		SINGLE OR DOUBLE.	RIVETS.		No. OF ROWS OF RIVETS.	RIVETS.		STRAPPED OR LAPPED.			
	Breadth.	Thickness.	Thickness.	Thickness.			Diam.	Spacing cr. to cr.		Diam.	Spacing cr. to cr.				
	Inches.	Inches.	Inches.	Inches.									Inches.	Inches.	
FLAT PLATE KEEL .....	49"	'75	'66	'66		DOUBLE	7/8	3.3	4R-3R	1"	4"	LAPPED			
" <u>DECK (if any)</u>	SHELL FORWARD IN WAY OF DEEP FRAMING. '67 BOTTOM SHELL FORWARD OF 3/4" FORM '65														
BOTTOM PLATING, No. of Strakes ....4.....		'59	'46	'46		DOUBLE	"	"	3R	7/8	3 1/2"	"			
BILGE PLATING, No. of Strakes .....1.....		'59	'46	'46		"	"	"	"	"	"	"			
SIDE PLATING, No. of Strakes .....2.....		'58	'44	'44		"	"	"	"	"	"	"			
UPPER DECK, Sheer-1 strake in Wells.....	72	1.12 FOR 2				"	1"	3.8	4R-3R	1"	4"	"			
UPPER DECK, Sheer-1 strake in Bridge ...	85	1.10 AFT	'44	'44		"	7/8	3.3	3R	7/8	3 1/2"	"			
STRAKE BELOW Sheer-1 strake in Wells.....	58	.78 FOR 2				"	"	"	"	"	"	"			
STRAKE BELOW Sheer-1 strake in Bridge ...	76	.64 AFT	'44	'44		"	"	"	"	"	"	"			
POOP SIDE PLATING .....				'38		SINGLE	3/4	3.0	1R	3/4	2 5/8	"			
BRIDGE SIDE PLATING ...		.60				DOUBLE	7/8	3.3	3R	7/8	3 1/2"	"			
FOREC'TLE SIDE PLATING			'41			SINGLE	3/4	3.0	1R	3/4	2 5/8	"			

Total No. of **W.T. BULKHEADS** in Vessel— 7 /

Extending to Upper Deck (Sec. 3 c) 7 /

„ Deck next below ✓

As per Rule 7

	Casting or Forging.	Scantlings.	Maker's Name.	Any departure from approved plans to be noted
<b>KEEL, Bar</b> .....	✓			
<b>STEM</b> .....	FORGING	9" x 2 1/2"	T. S. FOSTER & SONS L <sup>o</sup>	
<b>STERN FRAME</b> {		14" x 9"	STEAM LINE & AS APP <sup>o</sup> , DENNYSTOWN.	
Propeller Post .....	"			
Rudder .....	"	10 3/4 x 7 3/4	FORGE.	
<b>RUDDER—A X D</b> .....			OERTZ PATENT.	
<b>Speed of Vessel</b> .....	10 K			
<b>RUDDER</b> mainpiece at head ..	FORGING	10 1/2 Dia	W. BARNARD & CO L <sup>o</sup>	
" " <del>heel</del> .....			RUDDER BUILT OF	
" how constructed .....			STEEL PLATES & ANGLES AS APP <sup>o</sup>	
" double <del>or</del> single plate coupling, vertical or horizontal .....			52 HORIZONTAL.	

STEEL.	Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture). <i>Open Hearth process.</i> <i>Colvilles Ltd., Steel Company of Scotland Ltd.; Connell Iron Company Ltd;</i> <i>Lanarkshire Steel Company Ltd.; Stewarts &amp; Lloyds Ltd.</i>	
	Has the Steel been tested as required by the Rules? <i>Yes.</i>	

EQUIPMENT No. 3759457										LETTER Z		ANCHORS.			
Number of Certificate.	Anchors.	WEIGHT, EX. STOCK.			WEIGHT OF STOCK.			TEST, PER CERTIFICATE.			WEIGHT REQUIRED BY TABLE.	Description of Anchor.	Makers.	Where and when tested and Superintended.	
		Cwts.	qrs.	lbs.	Cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.				
47372	1st Bower ...	64	1	0	STOCKLESS			50	15	0	0	63 3/4	BRITANNIC	R. SYKES & SON L <sup>D</sup>	CRANLEY HEATH 30-9-33
47373	2nd „ ...	64	0	4				50	15	0	0	63 3/4	D <sup>2</sup>	D <sup>2</sup>	J. A. RELF.
47374	3rd „ ...	55	0	0				45	7	2	0	54 1/2	D <sup>2</sup>	D <sup>2</sup>	D <sup>2</sup>
	Collective weight.	183	1	4								182			
47375	Stream .....	14	2	6	4	2	8	13	12	2	0	17 1/2	ORDINARY.	D <sup>2</sup>	D <sup>2</sup>

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.		Strain.	Break- ing.	Supplied.	Per Rule.	Length.	Diam.					Length.	Chr.		Length.	Chr.
	Fathoms.	Inch.	Tons.	Tons.	Cwts. qrs. lbs.	Cwts.	Fathoms.	Inch.						Fathoms.	Inch.	Tons.	Fathoms.	Inch.
35864	270	2 1/4	9 1/2	12 7/8	686-0-0	682 1/2	270	2 1/4	STUD LINK	R. SYKES & SON L <sup>ds</sup>	CHADIFF 22-9-33 L. L. WRIGHT.		TOWLINE...	120	4 3/4	64.6	120	4 3/4
													HAWSEYS & WARPS	2290	2 3/4	21.1	2290	2 3/4
													"	2290	2 1/2	14.7	2290	2 1/2
Iron Steam Cables or Steel Wire	90	4 1/4	64.6				90	4 3/4	G. S. H.	/			"	2290	3	25.7		

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.		Strain.	Break- ing.	Supplied.	Per Rule.	Length.	Diam.					Length.	Chr.		Length.	Chr.
	Fathoms.	Inch.	Tons.	Tons.	Cwts. qrs. lbs.	Cwts.	Fathoms.	Inch.						Fathoms.	Inch.	Tons.	Fathoms.	Inch.
35864	270	2 1/4	9 1/2	12 7/8	686-0-0	682 1/2	270	2 1/4	STUD LINK	R. SYKES & SON L <sup>ds</sup>	CHADIFF 22-9-33 L. L. WRIGHT.		TOWLINE...	120	4 3/4	64.6	120	4 3/4
													HAWSEYS & WARPS	2290	2 3/4	21.1	2290	2 3/4
													"	2290	2 1/2	14.7	2290	2 1/2
Iron Steam Cables or Steel Wire	90	4 1/4	64.6				90	4 3/4	G. S. H.	/			"	2290	3	25.7		✓

Steering Gear, Steam *by Hastie & Co. Greenock.* Steering Gear, Hand *by relieving tackle to Post winch.*  
Boats *2 Lifeboats & 2 Cys* Steering Chains, Size and Test *Telemeter Gear.* Windlass *steam by Emerson Walker & Co.*  
Ceiling in Holds, thickness and material *2 1/2" N.P. throughout Holds.* Cargo Battens, thickness, material and spacing *6" 2" N.P. spaced 9' apart in Holds & bridge space.*  
Cargo Hatchways, (Upper Deck) *Steel beamings & angles.* Thickness of Plating *3" Solid covers.*  
Size of No. 1 Hatchway (Forward) *24'-3 1/2" x 24'-0"* No. 2 *33'-1 1/2" x 20'-0"* No. 3 *22'-1" x 20'-0"* No. 4 *35'-4" x 20'-0"* No. 5 *28'-8 1/2" x 24'-0"* No. 6 ✓  
Number of Shifting Beams *under Fore and Afters.* No. 1 Hatch *4 webs;* No. 2 Hatch *6 webs;* No. 3 Hatch *4 webs;* No. 4 Hatch *6 webs;* No. 5 Hatch *5 webs;*

*Builder's Signature*

For LITHGOWS LIMITED *K Campbell*

**GENERAL DECLARATION.** It should be stated (a) whether the vessel is fitted for the carriage and burning of oil used as fuel 2 (b) whether the vessel, not being an oil tanker, is fitted for carrying oil as cargo ✓ 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 & 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 as required by the Rules & found satisfactory.

Weather Decks; Shaft Tunnel; W. T. Bulkheads; & the Chain Locker were also tested & found satisfactory.

Freeboards verified & marks cut in on vessel's sides.

Duplicate Classification Certificates requested

The amount of Entry Fee ..... £ 9 : 0 : 0 } Fees applied for,  
21<sup>st</sup> Nov. 1933  
Special Survey Fee.... £ 327 : 0 : 6 } Received by me,  
28/11/1933  
FREEBOARD.  
Travelling Expenses, if any, £ 16 : 0 : 0

I am of opinion the Vessel should be Classed \*100A1

State whether the Vessel has been built under Special Survey *yes.* Signature *R. Dunsmeuir.*  
Surveyor to Lloyd's Register of Shipping.

**DUPLICATE**  
Certificates to be sent to Greenock. Date of issue 4/12/33 in duplicate

Committee's Minute **GLASGOW' 28 NOV 1933**

Character assigned  $\frac{1}{2}$  100 A1

1133

Lloyd's Arch  
+ LMC 11.33.



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 vessel is a sister to the S. S. "HARBURY." Ark Rep No. 19636

List of Plans.

Midship Section; Profile & Decks; Sternframe; Rudder; Bulkheads; Tunnel;  
Side Stringers; Cruiser Stern; Hatches; Strengthening at Bridge Ends;  
Hatch-end Beams; Additional Strengthening in Double Bottom Forward; W.T. Escape Hatches;  
Pumping Arrangements;

Midship Section; Profile & Decks: (As built)

Forging Reports:—Sternframe; Rudder; Quadrant & Tiller; Stern;

Particulars of Drop Test of Cast Steel Anchors, viz.:— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	1st Bower	WEIGHT HEAD & PIN. 40-1-7	SURV INIT'S R.L.	NO CERTIFICATE 3571	DATE OF TEST. 13.9.33.
	2nd "	39-3-22	R.L.	3570	13.9.33
	3rd "	34-2-6	R.L.	3573	13.9.33.

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 38.33 ft., R.Q.D. ✓ ft., Bridge 276.04 ft., Forecastle 33.88 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 DK (STL)

Official No. 163410 : 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,	130.29	420	Fore peak tank,		
Double bottom, under Engines and Boilers,	22.03	112	After peak tank,		212
Double bottom, if under Engines only,			Deep tank, aft,		
Double bottom, if under Boilers only, DRY TANK W.T. Comp <sup>d</sup>	17.46		Deep tank, forward,		
Double bottom, forward,	183.29	804	Other tanks, if fitted,		
	Total capacity of double bottom	1336	(If necessary, furnish further information by sketch.)		

\* The wells are not to be included in the lengths of the tanks.  
353.32

Order for Special Survey No. 3338

Date 6th February 1933

Dates of Surveys held while building

(1933) JAN. 25 FEB. 13-8-16-20-22-28 MAR. 2-6-8-14-21-23-30 APR. 4-6-11-13-14-19-21-25-28 MAY 2-8-10-15-17-22-24-30 JUNE 1-8-12-16-20-26 JULY 13-20-28 AUG. 1-3-11-14-23-28 SEPT. 1-4-6-13-20-22-25-26-28-29 OCT. 2-4-6-9-11-12-13-16-14-18 NOV. 2-14-16-23

Total No. of Visits