

## STEEL STEAMER or MOTORSHIP.

Received at London Office FEB 19 1941.

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

14<sup>th</sup> FEBRUARY 1941. Port of **GREENOCK**

No. 21292

Survey held at **PORT GLASGOW**Date First Survey 28<sup>th</sup> MAY 1940.Last Survey 6<sup>th</sup> FEBRUARY 1941.On the (State if Machinery fitted Aft and if Single, Twin or Triple Screw) **SINGLE SCREW STEAMER "EMPIRE STREAM" MACHINERY AFT. E Type**State Type (Full Scantling, Complete Superstructure with or without Tonnage Openings) **FULL SCANTLING.**State Type of Erections **FORECASTLE**TONNAGE under Tonnage Deck... **2186.46**CLASS **100 A.1.**State if with freeboard as condition of Class **NO**Built 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 most on summer L.W.L. See Sec. 3 (1a) **L 312.0**Launched **2<sup>nd</sup> DEC. 1940.** Yard No. **948**

Total

Breadth (greatest moulded) **B 44.25**Builders **LITHGOWS LTD.**Gross Tonnage **2921.75**Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c) **U.D. 22.08**  
**R.Q.D. 27.08**Owners **MINISTRY OF SHIPPING.**Register Tonnage **1638.03**1st Longitudinal Number (L x D) **= 6888.96**Managers **HUDSON STEAMSHIP CO LTD.**2nd Numeral L x (B + D) **= 20694.96**

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

Residence **8 LLOYDS AV. LONDON.**

## REGISTERED DIMENSIONS.

FEET.

Length **315.2**Framing Depth "d," at middle of length. See Sec. 3 (1d) **19.04**Port of Registry **GREENOCK**Breadth **44.45**Proportions—Depth to Length—Uppermost continuous deck to top of keel **U.D. 14.13**  
**R.Q.D. 11.52**

If surveyed while building, afloat, or in dry dock

Depth **19.90**Draught Moulded **19.9 1/2"****BUILDING & AFLOAT.**

## 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.
AMES, Spacing amidships	27" ✓		Bracket Floors, Frame	✓	
" " from 3/4 length amidships to Collision bulkhead	27" ✓		" " Reversed Frame	✓	
" " in peaks	24" ✓		" " Vertical Struts	✓	
DE FRAMING.			Centre Girder, depth and thickness amidships	36" x 44" ✓	
Frame Amidships, Angle <b>E</b> or <b>F</b> <b>U.D. 10 3 1/2 49</b> <b>R.Q.D. 11 3 1/2 46</b>	10 3 1/2 49 11 3 1/2 46	10x3 1/2 x 40 approx. 11x3 1/2 x 42 approx.	" " top Angles	3 3 38 ✓	
" " Extends up to DECK ✓	✓		" " bottom Angles	3 1/2 3 1/2 44 ✓	
Reversed Frame Amidships, Angle	✓		Side Girders, No. each side and thickness	ONE ✓	
" " Extends up to	✓		Margin Plate depth (excl. of flange) and thickness	32 1/2 x 42 ✓	
Depth of Framing Girder	10" x 11" ✓		" " Vertical Angle to Tank side	5 5 41 ✓	
Frames in Uppermost Continuous 'tween Decks, Angle, <b>E</b> or <b>F</b>	✓		" " Bracket abaft 1/4 len. from stem	3 3 39 ✓	
" " Second 'tween Decks, Angle, <b>E</b> or <b>F</b>	✓		" " Vertical Angle to Tank side	3 3 39 ✓	
" " Third " " " "	✓		" " Bracket from forward 1/4 len. from stem to Panting Area	9'0" x 34" ✓	
" " from 1 len. for'd. to 15% len. from Stem	10 3 1/2 44	10x3 1/2 x 40 approx.	" " Gussets, spacing and scantling abaft 1/4 len. from stem	9'0" x 34" ✓	
" " in Peaks, Angle or <b>E</b>	6 3 39 ✓		" " Gussets, spacing and scantling from forward 1/4 len. from stem to Panting Area	9'0" x 34" ✓	
Diameter and Spacing of Rivets through Frame and Shell Plating amidships	3/4 - 5/4" ✓		Tank Side Brackets, height above base line at toe of Frame and thickness	52 x 39 ✓	
State if Frame Joggled	YES. AMIDships ✓		INNER BOTTOM PLATING.		
Are the scantlings and arrangements in the Panting Area in accordance with the Rules and/or as approved?	AS APPROVED. ✓		Breadth and thickness of Middle Line Strake	66 1/2 x 50 ✓	Plg increased in area of centre under hatchways
Are the scantlings and arrangements in way of the Bottom Forward in accordance with the Rules and/or as approved?	AS APPROVED. ✓		Thickness of remainder in Holds	50 ✓	
INGLE BOTTOM.			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. ✓	
Floors, Depth and thickness at mid-line in Holds	✓		BEAMS. RAISED QUARTER.		
Height of Brackets at side above base line at toe of frame	✓		Uppermost Continuous Deck, amidships	6 3 1/2 38 ✓	
Middle Line Keelson, on Floors, Angles, <b>E</b> or <b>F</b>	✓		" " in Wells, Angle, <b>E</b> or <b>F</b>	✓	
" " Through Plate or Intercoastal Plate	✓		" " in way of Bridge, Angle, <b>E</b> or <b>F</b>	✓	
" " Foundation Plate on Floors	✓		Spacing	EVERY FR. ✓	
" " Flat Plate Keel Angles	✓		UPPER Second Deck, amidships, Angle, <b>E</b> or <b>F</b>	6 3 1/2 38 ✓	
Side Keelsons, No. each side	✓		Spacing	EVERY FR. ✓	
" " thickness of Intercoastal Plate	✓		Third Deck, amidships, Angle, <b>E</b> or <b>F</b>	✓	
" " Angles	✓		Spacing	✓	
DOUBLE BOTTOM.			Fourth Deck, amidships, Angle, <b>E</b> or <b>F</b>	✓	
Solid Floors, thickness and spacing	34" EV. FR. ✓		Spacing	✓	
" " Are Frame and Reversed Frame joggled?	YES ✓		Poop Deck, Angle, <b>E</b> or <b>F</b>	✓	
Bracket Floors, breadth and thickness at middle line	✓		Spacing	✓	
" " breadth and thickness at margin plate	✓		Bridge Deck, Angle, <b>E</b> or <b>F</b>	✓	
			Spacing	✓	
			Forecastle Deck, Angle, <b>E</b> or <b>F</b>	7 3 33 5 3 30/25 ✓	
			Spacing	EVERY FR. ✓	



# 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.
<b>PILLARS</b> , No. of Rows.....			✓		Stringer Plate, breadth and thickness in way of Bridge .....			✓	
„ in 'tween Decks, Size and Spacing.....			✓		Thickness of Plating abreast Deck openings in way of Wells .....			✓	
„ „ „ „ „			✓		Thickness of Plating abreast Deck openings in way of Bridge .....			✓	
„ in Holds „ „			✓		Thickness of Plating within line of openings...	.30		✓	
„ „ „ „ „			✓		If Sheathed, material and thickness .....			✓	
<b>Centre Line Bulkhead.</b>					<b>Third Deck.</b>				
Stiffeners and Spacing.....			✓		Stringer Plate, breadth and thickness.....			✓	
Plating, thickness of .....			✓		If Plated, state thickness.....			✓	
<b>STRINGERS AND DECKS.</b>					<b>Fourth Deck.</b>				
<b>Uppermost Continuous Deck (RAISED QUARTER)</b>					Stringer Plate, breadth and thickness.....			✓	
Stringer Plate, breadth and thickness in Wells.....	.80 1/2 x .62		✓		If Plated, state thickness .....			✓	
„ „ „ „ in way of Bridge .....	.80 AT BREAK.		✓		<b>Poop Deck.</b>				
„ Angle in Wells .....	6 6 .60		✓		Stringer Plate, breadth and thickness .....			✓	
Thickness of Plating abreast Deck openings in way of Wells .....	.33 x .32		✓	See plan	Plating, Sheathing, material and thickness ...			✓	
Thickness of Plating abreast Deck openings in way of Bridge .....			✓		<b>Bridge Deck.</b>				
Thickness of Plating within line of openings...	.30		✓	See plan	Stringer Plate, breadth and thickness.....			✓	
If Sheathed, material and thickness .....	2" COMP. AFT.		✓		Plating, Sheathing, material and thickness ...			✓	
<b>UPPER Second Deck.</b>					<b>Forecastle Deck.</b>				
Stringer Plate, breadth and thickness in Wells.....	.82 1/8 x 1.05		✓		Stringer Plate, breadth and thickness.....	.31		✓	
	1.08 AT BREAK.		✓		Plating, Sheathing, material and thickness ...	.31 .50		✓	UNDER NINDLASS.

## SHELL PLATING.

SCANTLINGS.					RIVETING.				
STRAKES.	AS IN VESSEL.				EDGES.		BUTTS.		
	AMIDSHIPS.		FORWARD.	AFT.	State if jogged? <i>No</i>	RIVETS.	No. OF ROWS OF RIVETS.	RIVETS.	
	Breadth.	Thickness.	Thickness.	Thickness.				Diam.	Spacing or to cr.
	Inches.	Inches.	Inches.	Inches.				Inches.	Inches.
FLAT PLATE KEEL .....	73 3/4	.62 ✓	.57 ✓	.57 ✓		DOUBLE	3/4 3"	TREBLE	7/8 3/8 LAPPED.
„ DELG. (if any)	2 STRAKES OF BOTTOM PLATING P&S .57" FOR 2/3 LEN. TO RULE POSITION OF COLLISION BULKHEAD.								
BOTTOM PLATING, No. of Strakes .... 2 .....		.52 ✓	.45 ✓	.44 ✓		DOUBLE ✓	3/4 3 ✓	TREBLE ✓	3/4 2 5/8 LAPPED.
BILGE PLATING, No. of Strakes .... 2 .....		.52 ✓	.45 ✓	.44 ✓		" ✓	3/4 3 ✓	" ✓	3/4 " ✓
SIDE PLATING, No. of Strakes .....		.52 ✓	.40 ✓	.40 ✓		" ✓	3/4 3 ✓	" ✓	3/4 " ✓
UPPER DECK, Sheer-strake in Wells.....	65 1/16	.82 ✓	.40 ✓	.40 ✓		" ✓	7/8 3 3/8	QUAD ✓	1 4 ✓
„ „ „ „ „		1.00 AT BREAK ✓							
UPPER DECK, Sheer-strake in Bridge ...	64 1/16	.60 ✓	.40 ✓	.40 ✓		"		TREBLE ✓	7/8 3/8 ✓
STRAKE BELOW Sheer-strake in Wells.....		.52 ✓	.40 ✓	-		"	3/4 3 ✓	" ✓	3/4 2 5/8 ✓
STRAKE BELOW Sheer-strake in Bridge.....		.52 ✓	-	.40 ✓		"	3/4 3 ✓	" ✓	3/4 " ✓
POOP SIDE PLATING .....		✓							
BRIDGE SIDE PLATING ...		✓							
FORECASTLE SIDE PLATING			.37 ✓			SINGLE.	3/4 2 5/8	SINGLE ✓	3/4 2 5/8 LAPPED.

## WATERTIGHT BULKHEADS.

Total No. of W.T. BULKHEADS in Vessel—	4 ✓
Extending to Upper Deck (Sec. 3 c)	3 ✓
„ Deck next below	1
As per Rule	5.

## FORGINGS and CASTINGS.

	Casting or Forging.	Scantlings.	Maker's Name.	Any Departure from Approved Plans to be Noted.
<b>KEEL</b> , Bar .....				FLAT PLATE KEEL.
<b>STEM</b> .....				8" x 2 1/4" ✓
<b>STERN FRAME</b>	Propeller Post .....	SCRAP 9" x 5 3/4" ✓	FOSTER	
	Rudder „ .....	STEEL 9" x 5 3/4" ✓	SONS L <sup>2</sup>	
<b>Speed of Vessel</b> .....				UNDER 12 KNOTS.
<b>RUDDER—Type</b> .....				DOUBLE PLATE STREAMLINED.
„ A x D .....				227
„ Diam. of head .....		FORGING 7 1/2" ✓	FOSTER	
„ Mainpiece at top pintle		7 1/8 x 6 1/4 ✓	SONS L <sup>2</sup>	
„ „ heel ...		3 3/4 x 6 1/4		
„ how constructed .....				PARTIAL FORGED FRAME.
„ double or single plate				DOUBLE
„ coupling, vertical or horizontal .....				VERTICAL.

	Plating Thickness.	STIFFENERS.			
		VERTICAL.		HORIZONTAL.	
		Scantlings.	Spacing.	Scantlings.	Spacing.
<b>MIDSHIP BULKH'D</b> , Upper tween decks					
„ „ Second „					
„ „ Third „					
„ „ Holds (B1).....	.32	10" x 3 1/2" x 40 ✓	30 3/8 ✓		
„ „ „		9 x 3 x 40 ✓	27 ✓		
<b>COLLISION</b> „ (in Hold) (1.27).....	.45	6 x 3 x 32 ✓	24 ✓	H.T. PLATE	
	.31	5 x 3 x 30 ✓	24 ✓	2 BOX BEAMS	
<b>AFTER PEAK</b> „ „ 6 x 9.....	.43	6 x 3 x 30 ✓	24 ✓	RECESS ✓	

<b>STEEL.</b>	Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture) <i>See plan as built.</i> OPEN HEARTH.
	COLVILLES LTD, THE STEEL CO OF SCOTLAND,
	Has the Steel been tested as required by the Rules? YES.



Estimated from plans 22206.73

EQUIPMENT No 22097.01										LETTER "Z" ✓		ANCHORS.			
Number of Certificate.	Anchor.	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.			
53531	1st Bower	✓ 42	0	4	STOCKLESS			37	2	2	0	42 ✓	GREENS QUICK	J. GREEN	C.H. 31/8/40. L. PAUL
53532	2nd "	✓ 42	0	21	"			37	6	1	0	42 ✓	GRIP. EAST STEEL	" "	" " "
	3rd "	1 Bower	diff.	with an a/c em								35 1/2 ✓	HEAD.	" "	" " "
	Collective weight.	84	0	25								119 1/2 ✓			
99/85	Stream	11	0	14	✓ 2	3	19	13	0	0	0	11 ✓	ORDINARY (FORGED NOT IRON)	NOT STATED.	NETHERTON 20/8/40 J. REIF.

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.	Statur- ing.	Break- ing.	Supplied.	Per Rule.	Length.	Diam.	Length.					Cir.	Length.		Cir.		
	Fathoms.	Ins.	Tons.	Tons.	Cwts.	qrs.	lbs.	Cwts.	Fathoms.	Ins.				Fathoms.	Ins.	Tons.	Fathoms.	Ins.	
114357	105 1/2	1 1/8	63 1/2	88 1/2	188	2	0	425 1/2	240	1 1/8	STUD LINK	NOT STATED.	NETHERTON 31/7/40 J. REIF	TOWLINE...	100	4	33.2	100	4
114358	105	1 1/8	63 1/2	88 1/2	188	1	17	3 1/2 for 210 fms		"	"	"	"	HAWSERS & WARPS	2@90	2 1/2	13.2	2@90	2 1/2
	2 1/8 30 fms disp. with an a/c em.																		
															2@90	2 1/2	10.8	2@90	2 1/2
Low Stream Chain or Steel Wire	75	4 1/2		36.4					75	4 1/2									

Steering Gear, Type (Power or hand) *BY HASTIES, GREENOCK* Alternative Means of Steering *HAND WHEEL AFT.*

Steering Chains (Size and Test) *NONE, STEERING GEAR, AFT.* Windlass *STEAM. EMERSON, WALKER L<sup>d</sup>* Boats *1@23'0" & 1@24'0"* *TELE MOTOR CONTROL.*

Ceiling in Holds, thickness and material *✓* Cargo Battens, thickness, material and spacing *NONE.*

Cargo Hatchways.—(Upper Deck) *42" x 51" CORNING'S STIFFENED.* Thickness of Hatches *3" ✓*

Size of Hatchways No. 1 (Fwd.) *36'0" x 25'0"* No. 2 *38'3" x 30'0"* No. 3 *45'0" x 30'0"* No. 4 *42'9" x 30'0"* No. 5 *✓* No. 6 *✓*

Number of Shifting Beams *N<sup>os</sup> 1 & 2 = 5, N<sup>os</sup> 3 & 4 = 6.*

Builder's Signature *FOR LITHGOWS LIMITED* *R. Campbell*

GENERAL DECLARATION. It should be stated (a) whether the vessel (if not a motorship) is fitted for the carriage and burning of oil used as fuel *NO*

(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 (where required to be inserted in the Notation).

*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 materials & workmanship are of good quality.*

*all the double bottom tanks, fore & after peak tanks & deep tank have been tested as required by the rules & found satisfactory. The weather decks, W.S. Bulkheads, & W.S. Door have been hose tested & found satisfactory.*

*The freeboard has been verified & the marks cut in on the vessel's sides.*

*The hand pump, windlass, steering gear, auxiliary steering gear, W.S. Door and bilge suction were tried under working conditions & found satisfactory.*

*Emergency equipment has been supplied to this vessel & no sparring has been fitted.*

The amount of Entry Fee ..... £ 6 : 0 : 0

Special Survey Fee.... £ 221 : 1 : 6

*FREEBOARD* 13 0 0

Travelling Expenses, if any £

*SPECIFICATION FEE* 55 5 6.

Fees applied for, *14 FEB 1941*

Received by me, *JA*

I am of opinion the Vessel should be Classed *+ 100 A.1.*

State whether the Vessel has been built under Special Survey *YES.*

Signature *J.A. Jamison*  
Surveyor to Lloyd's Register of Shipping.

Certificate to be sent to *GREENOCK OFFICE.* Date of issue *11/3/41*

Committee's Minute *GLASGOW 18 FEB 1941*

Character assigned *+ 100 A.1*

*2.41*

*Lloyd's A&C*

*+ LMC 2.41 2.A.*

*Nate Capt & Cgo. Muns.*



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 the first vessel to be constructed by Messrs Lithgows Ltd. for the Ministry of Shipping to the "E" Type design. As there are a number of duplicate vessels the approved plans which are herewith forwarded should be returned to this office as soon as possible. The forging reports and plans of vessel as built are also forwarded.

As requested in the London letter dated 4th March 1940 & 17th May 1940 the plans & specification have been supervised and a copy of the certificate is herewith enclosed.

PARTICULARS OF ELECTRIC WELDING (if employed). BULKHEAD BRACKETS TO TANK TOP & STIFFENERS. CORNER BARS OF BULKHEADS & TANK ENDS. GUSSET PLATES TO TANK TOP. BUTTS OF DECK STRINGER & HATCH SIDE COAMING ANGLES. HEADS & HEELS OF PILLARS. 2 UPPER DECK STRINGER PLATE BUTTS, PORT & STARBOARD, REINFORCED WITH ELECTRIC WELDING. ✓

SPECIAL NOTATIONS:—Either as part of the vessel's class or for record in the Register Book CRUISER STERN. D.F. LLOYDS A & C.P. "INTERMEDIATE B.H. DISPENSED WITH: 4.B.H." "CARGO BATTENS NOT FITTED"

Particulars of Drop Test of Cast Steel Anchors, viz.:— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	1st Bower	MC. PINS. 26-1-0 : A.E.G. : 460 : 19-7-40
	2nd "	26-1-27 : A.E.G. : 482 : 31-7-40.
	3rd "	

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop ✓ ft., R.Q.D. 192.77 ft., Bridge ✓ ft., Forecastle 26.92 ft.

(in feet and tenths). When the Poop or Forecastle are joined to the B.D., this should be distinctly stated

Official No. 166994 Signal Letters ✓ Extreme Breadth over Belting (Circ. 1611) Over-all Length 325.75' (Circ. 1703)

No. and Material of Decks 1 DK & R.Q.DK.

Parts of Bottom of Vessel coated with cement or approved composition TANKS CEMENT WASHED, CEMENTED IN WAY OF LANDINGS AND BUTTS ON BOTTOM. PEAKS CEMENT WASHED. CEMENT IN POCKETS. ✓ Tank under boiler cement See letter 7.3.41

Particulars of composition (if fitted) and of approval

PARTICULARS OF WATER BALLAST:—(Comprising all tanks which may be used for Water Ballast. (Circ. 1284) Wells are not to be included in the lengths of the tanks, but Cofferdams and Dry Tanks (if tested) are to be included.)

Where Fitted.	Length. Feet.	Water Capacity. Tons.	Where Fitted.	Length. Feet.	Water Capacity. Tons.
Double bottom, aft, Nos 3 & 4 HOLDS	144	419	Fore peak tank,	-	172
Double bottom, under Engines and Boilers,	22.5	36	After peak tank,	-	63
Double bottom, if under Engines only,			Deep tank, aft,	9.0	296
Double bottom, if under Boilers only,			Deep tank, forward,		
Double bottom, forward, Nos 1 & 2 HOLDS	99.0	253	Other tanks, if fitted,		
Total length (if continuous) and Capacity	✓ 265.5	708	(If necessary, furnish further information by sketch.)		

Order for Special Survey No. 3442

Date 18th APRIL 1940.

Dates of Surveys held while building

(1940) MAY 28-29. JUNE 3-4. 12-14. 14-18. 20-28. JULY 1-4. 8-10. 12-19. 22-25. 26-30. AUG. 1-5. 13-19. 21-26. 30-SEPT. 4-6. 11-12. 13-18. 20-26. OCT. 2-4. 7-11. 13-16. 17-18. 22-23. 29. NOV. 6-9. 11-12. 15-20. 24-29. DEC. 2-11. 27-31.  
(1941) JAN. 14-21-23. FEB. 3-6

Lloyd's Register Foundation  
Total No. of Visits 63