

RETAIN

STEEL STEAMER or MOTORSHIP

Received at London Office 11 NOV 1936

Rpt. 1.

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 3rd November 1936. Port of Grunoek

Survey held at Grunoek.

Date First Survey 25th OCTOBER 1935.

Last Survey 2nd NOVEMBER.

No. 20255.

1936.

On the (State if Machinery fitted Aft and if Single, Twin or Triple Screw) Twin S. S. "CLAN MACAULAY"

State Type (Full Scantling, Complete Superstructure with or without Tonnage Openings) Comp. Super. without Cargo opening. State Type of Erections Mchy. Amidst.

TONNAGE under Tonnage Deck... 7427.23

CLASS 100A1.

State if with freeboard as condition of Class YES.

Built at Grunoek

Do. of space or spaces between Tonnage Dk. and Upper Dk. 2210.09

Length from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a) L 470.0

Breadth (greatest moulded) B 471.84

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

1st Longitudinal Number (L x D) 20053

2nd Numeral L x (B + D) 51195

Framing Depth "d," at middle of length. See Sec. 3 (1d) 18.5

Proportions—Depth to Length—Uppermost continuous deck to top of keel 10.97

Do. Long Bridge to top of keel ✓

Draught Moulded 29'10"

Launched 7.8.36 Yard No. 425.

Builders The Grunnoek Dock Co. Ltd.

Owners Shellharbour Steamship Co. Ltd.

Managers Copper & Son, & Co. Ltd.

Residence London.

Port of Registry Glasgow.

If surveyed while building, afloat, & in dry dock YES.

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		34				Bracket Floors, Frame		9	3 1/2	44	9 x 3 1/2 x .38
" " from 3/8 length to Collision bulkhead		27				" " Reversed Frame		8	3 1/2	44	8 x 3 1/2 x .39
" " in peaks		24				" " Vertical Struts		8	3 1/2	44	8 x 3 1/2 x .39
" " ALT. FRAMES 9-15		30				Centre Girder, depth and thickness amidships		48		.64	
SIDE FRAMING.						" " top Angles		3 1/2	3 1/2	.59	
Frame Amidships, Angle, E or F		12	3 1/2	.57		" " bottom Angles		5	5	.69	
" " Extends up to		3rd DECK.				Side Girders, No. each side and thickness		2 @		.46	
Reversed Frame Amidships, Angle						Margin Plate depth (excl. of flange) and thickness		41		.62	41 x .59
" " Extends up to						" " Vertical Angle to Tank side Bracket abaft 1/2 len. from stem		6	6	.51	
Depth of Framing Girder		12				" " Vertical Angle to Tank side Bracket forward 1/2 len. from stem		6	6	.51	
Frames in Uppermost Continuous 'tween Decks, Angle, E or F		9	3 1/2	.38		" " Gussets, spacing and scantling abaft 1/2 len. from stem		CONTINUOUS ALT. .50 IN			
" " Second 'tween Decks, Angle, E or F		10	3 1/2	.50		" " Gussets, spacing and scantling forward 1/2 len. from stem		WAY OF O.F. DOUB. BOTT. 6 x 3 1/2 x .62 ANG. ON EVERY FRAME IN WAY OF BOILER ROOM FEED TANK.			
" " Third						Tank Side Brackets, height above base line at toe of Frame and thickness		78 .51 .51 LEVEL WITH TOP IN WAY OF INSULATED HOLDS. 5 1/2 .58 57 1/2 x .58			
Framing in Peaks, Angle or F		9	3 1/2	.46		INNER BOTTOM PLATING.		WREC SECTION No 82			
Diameter and Spacing of Rivets through Frame and Shell Plating amidships		7/8 @ 6 DIA.				Breadth and thickness of Middle Line Strake					
State if Frame Joggled		YES.				Thickness of remainder in Holds		.50			
PANTING ARRANGEMENTS (Sec. 7), state system and particulars		DEEP FRAME SYSTEM. 12 x 3 1/2 x .48 BA. WITH 6 x 3 1/2 x .40 REV. ANG. FOR 1 1/2" GIRDER. 3 SIDE STRINGERS. NO SHELL CORR. SHELL PLATING INCREASED AS APPROVED. 5 x 5 x .50 SING. FRAME WITH 2 CORR. ROWS OF RIVETS. ADDITIONAL INTERCOSTALS. 3 STRANES SHELL PLATING .79 AS APPROVED.									
STRENGTHENING OF BOTTOM FORWARD. State Particulars											
SINGLE BOTTOM.											
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?		YES.			
Height of Brackets at side above base line at toe of frame						BEAMS.					
Middle Line Keelson, on Floors, Angles, E or F						Uppermost Continuous Deck, amidships in Wells, Angle, E or F		10 x 3 1/2 x 3 1/2	.46	56 x 9 x 3 1/2 x .48 BA.	
" " Through Plate or Intercoastal Plate						" " in way of Bridge, Angle, E or F		9	3 1/2	.48	
" " Foundation Plate on Floors						Spacing		34			
" " Flat Plate Keel Angles						Second Deck, amidships, Angle, E or F		12 x 3 1/2 x 3 1/2	.46	.60	
Side Keelsons, No. each side						Spacing		34			
" thickness of Intercoastal Plate						Third Deck, amidships, Angle, E or F		10 x 4 x 4	.54	57	10 x 3 1/2 x 3 1/2 .54
" Angles						Spacing		34			
DOUBLE BOTTOM.						Fourth Deck, amidships, Angle, E or F					
Solid Floors, thickness and spacing						Spacing					
" " Are Frame and Reversed Frame joggled?						Poop Deck, Angle, E or F		8	3	.48	
Bracket Floors, breadth and thickness at middle line		36		.46		Spacing		60			
" " breadth and thickness at margin plate		58		.46		Bridge Deck, Angle, E or F		6	3	.38	
						Spacing		34		.28	
						Forecastle Deck, Angle, E or F		11	3 1/2	.54	
						Spacing		34			

WRECK SECTION No 822A

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.....	2 ROWS			Stringer Plate, breadth and thickness in way of Bridge	70	45	
„ in 'tween Decks, Size and Spacing	WIDE SPACED			Thickness of Plating abreast Deck openings in way of Wells		42	
„ „ „ „ „	TUBULAR & BUILT			Thickness of Plating abreast Deck openings in way of Bridge		42	
„ in Holds „ „	PILLARS, & GUARDERS			Thickness of Plating within line of openings...		36	
„ „ „ „ „	AS APPROVED.			If Sheathed, material and thickness		✓	
Centre Line Bulkhead.				Third Deck.			
Stiffeners and Spacing.....		✓		Stringer Plate, breadth and thickness.....	77	39	72 x 39
Plating, thickness of		✓		If Plated, state thickness.....		36	
STRINGERS AND DECKS.				Fourth Deck.			
Uppermost Continuous Deck.				Stringer Plate, breadth and thickness.....		✓	
Stringer Plate, breadth and thickness in Wells	70	68	68½ x 68	If Plated, state thickness		✓	
„ „ „ „ in way of Bridge	70	68	68½ x 68	Poop Deck.			
„ Angle in Wells	6	6	68	Stringer Plate, breadth and thickness		39	
Thickness of Plating abreast Deck openings in way of Wells			64	Plating, Sheathing, material and thickness ..		34 WITH TEAK 2½" OVER ACCOM. AT FORE END.	
Thickness of Plating abreast Deck openings in way of Bridge	68	66		Bridge Deck.			
Thickness of Plating within line of openings...			44	Stringer Plate, breadth and thickness.....	72	30	
If Sheathed, material and thickness	EXPOSED TEAK 2½"			Plating, Sheathing, material and thickness ..		27 WITH TEAK 2½" EXCEPT OVER SIDE RUNNERS.	
Second Deck.				Forecastle Deck.			
Stringer Plate, breadth and thickness in Wells...	70	45		Stringer Plate, breadth and thickness.....		39	
				Plating, Sheathing, material and thickness ..		34	

SHELL PLATING.

SCANTLINGS.					RIVETING.							
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES. State if joggled? <i>NO.</i>			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.		Inches.	Inches.	
FLAT PLATE KEEL	54	.94	.83	.83		DOUBLE	1	$3\frac{7}{8}$	4	1	4	LAPPED.
IN WAY OF " Base (if any) DUCT KEEL.	54	1.10				"	"	"	"	"	"	"
BOTTOM PLATING, No. of Strakes 4.....		.72	.63	.54		"	$\frac{7}{8}$	$2\frac{5}{16}$	4-3	$\frac{7}{8}$	$3\frac{1}{2}$	"
BILGE PLATING, No. of Strakes 2.....		{ .72 .70	.63	.54		"	"	"	"	"	"	"
SIDE PLATING, No. of Strakes 4.....		.70	.56	.50		"	"	"	"	"	"	"
UPPER DECK, Sheer- strake in Wells.....	72	.80	.50	.51		"	"	"	"	1	4	"
UPPER DECK, Sheer- strake in Bridge ...	72	.80				"	"	"	4	"	"	"
STRAKE BELOW Sheer- strake in Wells.....	72	.74	.50	.50		"	"	"	4-3	"	"	"
STRAKE BELOW Sheer- strake in Bridge ...	72	.74				"	"	"	4	"	"	"
POOP SIDE PLATING42		SINGLE.	$\frac{7}{8}$	3	1	$\frac{7}{8}$	$3\frac{5}{8}$	"
BRIDGE SIDE PLATING42				SINGLE. DOUBLE ATTENDS.	$\frac{3}{4}$	3	3	$\frac{3}{4}$	$2\frac{5}{8}$	"
FOREC'TLE SIDE PLATING			.44			SINGLE.	$\frac{7}{8}$	3	1.	$\frac{7}{8}$	$3\frac{5}{8}$	"

WATERTIGHT BULKHEADS.

Total No. of W.T. BULKHEADS in Vessel— *10.*

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

„ Deck next below ✓.

As per Rule 7.

STIFFENERS.

		Plating Thickness.	VERTICAL.		HORIZONTAL.	
			Scantlings.	Spacing.	Scantlings.	Spacing.
MIDSHIP BULK'D,	Upper tween decks	26	5x3 34/32	29/28	✓	✓
"	Second "	31	6 1/2 x 3 1/34	"	✓	✓
"	Third "	✓	✓	✓	✓	✓
"	Hold	46/25	CW. 12x2 1/2x3 1/2x40	52/28	✓	✓
COLLISION	(in Hold)	56/38	B.A. 8x3 1/2x50	24	3 SEMI BOX.	
AFTER PEAK	"	56/34	B.A. 10x3 1/2x50	30	1 "	
			2 REV. 4x4x40			

FORGINGS and CASTINGS.

	Casting or Forging.	Scantlings.	Maker's Name.	Any departure from approved plans to be noted.
KEEL —Bar	UPPER	PL. PLT. '50		
	MIDDLE	CAST SHAPER	CARNTIME S. C. C. L.	
		STEEL.		
STEM	LOWER	ROLLED 11 1/2"		
STERN FRAME	Propeller Post	CAST SHAPER	STROMMEIS	
	Rudder	STEEL PLAN.	VERNSTER	
Speed of Vessel		16 KNOTS.		
RUDDER —Type		ORDINARY DOUBLE PLATE.		
" A x D		1354		ROTHMUND-HOER-
" Diam. of head		FORG. 17"		MUTTENVEREIN A.G.
" Mainpiece at top pintle		CAST STEEL	STROMMEIS	
" " heel		SHAPER AS	VERNSTER.	
" how constructed		PER PLAN		
" double or single plate		'50		
" coupling, vertical or horizontal		HORIZONTAL.		

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

STEEL.

COLUMBES L^o, THE STEEL COMPANY OF SCOTLAND, SKINNINGROVE IRON C^o L^o, APPLIED BY TROBRINGHAM STEEL C^o L^o,

Has the Steel been tested as required by the Rules? YES. KRYN & LAMY, SOUTH DURHAM S.C.; STEWARTS & LLOYDS L.

Has the Steel been tested as required by the Rules? YES. KRYN & LANY SOUTH DURHAM S.C.; STEWARTS & LLOYDS L^o.

EQUIPMENT No 52890.												LETTER f + .	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.			
95349	1st Bower ...	91	2	14	STOCKLESS			64	0	0	0	90	BYERS.	S. TAYLOR & SONS. NETH. 8-7-16	ROLL.
95345	2nd „ ...	90	2	7	"			63	12	2	0	90	"	"	" 9-7-16 "
95343	3rd „ ...	78	0	0	"			57	12	2	0	77½	"	"	" 7-7-16 "
	Collective weight.	260	0	21								257½			
95342	Stream	26	2	21	6	2	21	26	3	3	0	26½	RODGERS.	"	" 6-7-16 "

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.	Statu-ry.	Break-ing.	Supplied.	Per Rule.	Length.	Diam.	Length.					Cir.	Tons.		Length.	Cir.	
	Fathoms.	Ins.	Tons.	Tons.	Cwts.	qrs.	lbs.	Cwts.	Fathoms.	Ins.				Fathoms.	Ins.	Tons.	Fathoms.	Ins.	
88080	230	2½	127½	178½	916	2	10		300	2½	TAIYO STUR. 21NN.	S. TAYLOR & SONS. NETH. 22-7-16 R.E.L.F.	TOWLINE...	130	3½	89-7	130	3½	
													HAWSERS & WARPS	4090	3½	35-2	4090	3½	
													"	2090	8	MANILA	2090	8	
Iron-Stream Chain of Steel Wire	120	5		75-3					120	5	G.S.W. 6/27.	BRITISH ROPES LIMITED.	"	6090	7	"	6090	7	

Steering Gear, Steam *HYDRAULIC. 4 RAMS. 2 H.S. PUMPS, BY NASTIE* Steering Gear, Hand ✓

Boats 6 IN N.° Steering Chains, Size and Test TELE MOTOR CONTROL. Windlass STEAM BY EMERSON WALKER.

Ceiling in Holds, thickness and material N.° 1 & 5 HOLDS. 2½" W.P. Cargo Battens, thickness, material and spacing 2" W.P. 9" APART. IN HOLDS & TWEEN DECKS. CLEAR OF INSULATION.

Cargo Hatchways.—(Upper Deck). FORMED OF STEEL PLATES & ANGLES. Thickness of Hatches N.° 1-2½". N.° 2 & 5-2½". N.° 3 & 4-STEEL.

Size of No. 1 Hatchway (Forward) 20'3" x 21'0" No. 2 17'6" x 21'0" No. 3 22'8" x 21'0" No. 4 31'2" x 21'0" No. 5 22'8" x 21'0" No. 6 ✓

Number of Shifting Beams and/or Fore and Afters 3 IN N.° 1. 9 IN N.° 2. 4 IN N.° 3 & 5, 6 IN N.° 4.

THE GREENOCK DOCKYARD CO. LTD.

Builder's Signature *Neil Macdonald* SECRETARY

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 *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, instructions, & printed Rules of this Society. The materials & workmanship are of good quality. All the double bottom tanks, cofferdams, duct keel & peak tanks have been tested to Rule requirements & found satisfactory. The double bottom tanks N.° 1-2-3-3A-4 & 5 & fore cross bunker (below 3rd deck) have been arranged to carry oil fuel, F.P. above 150° F. & requirements of Sec. 20 of the Rules complied with. The weather decks, W.T. bulkheads & shaft tunnels have been tested. W.T. doors, ash shoots, & hand pump tested & found satisfactory. Freeboard verified & the marks cut in on vessel's sides. N.° 2-3 & 4 holds & tween decks insulated. N.° 3 & 4 upper & lower tween decks arranged for carrying chilled meat suspended from beams, upper tween decks 1 tier lower tween decks 2 tiers. (Refrig. Rpt. already forwarded). A duct keel is arranged from forward end of Boiler room to after end N.° 1 hold.

The amount of Entry Fee £ 12 : 0 : 0	Fees applied for,	(Special notations, where part of class, to be stated.)
<i>L.R. 2.</i>	3 RD NOVEMBER 1936	
Special Survey Fee.... £ 456 : 3 : 0	Received by me,	
FREEBOARD 20 : 0 : 0	11-11-36	
Travelling Expenses, if any £	13/11	
State whether the Vessel has been built under Special Survey <i>YES.</i>		
Certificate to be sent to <i>GRK. OFFICE.</i> Date of issue <i>16/11/36.</i>		

Committee's Minute *GLASGOW 10 NOV 1936* *RB*

Character assigned *÷ 100 A1.*

with freeboards.

11.36.

Lloyd's at 11.36

+ L.M.C. 11.36 F.D.

Fitted for oil fuel 11.36 F.P. above 150° F

Signature *H. L. Swinton.* Surveyor to Lloyd's Register of Shipping.

The Surveyors are requested not to write on or below the Committee's Minute.

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.)

Sister Vessel to Twin 10 "PERTHSHIRE", *Spk. 1st 6. Report No. 20186*
"CLAN MACARTHUR" 20082

The following items of structure have been electrically welded, carried out in accordance with the Society's regulations for the application of Electric Arc welding & found satisfactory:— Corners of square pillars in W⁴ & 5 holds & in W² & 3 & 4 lower lower decks. Pillar heads & heels. Corners of boundary angles on D.B. tank end floors. Seams & butts of engine seat plates on tank top. Frame collars at tank margin in engine space. Continuous gusset plates to tank margin in holds & bunkers. Frame collars in W³ & 4 upper & lower lower decks & in Refrig. mch. space. Frame collars at tunnel flat in W⁵ hold. Seams of lower d.k. plating in way of oil fuel bunker where single riveted. Butts of casing & deckhouse plates. Stiffeners on W³ & 4 steel hatch covers on upper & 2nd decks. Butts of rudder plates. Butts of upper d.k. stringer angles. Insulation bags to bulkheads, decks, & tank top.

SPECIAL NOTATIONS:—Either as part of the vessel's class or for record in the Register Book

Duct keel forward of Mch. space.

Fitted for oil fuel 11.36 E.P. above 150° F.

D.F. E.S.D. G.Y.C. Ref. Mch. Cruise stern.

Particulars of Drop Test of Cast Steel Anchors, viz.:—
Weight, Surveyor's Initials, Number of Certificate, Date of Test.

1st Bower	58-0-18 (INC. PINS)	T.R.M.	5522	6-12-25
2nd "	58-1-16	"	T.R.M.	5535 27-12-25
3rd "	50-2-5	"	R.L.	4056 10-1-26

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 32 ft., R.Q.D. 1 ft., Bridge 119 ft., Forecastle 69 ft. (in feet and tenths). When the Poop or Forecastle are joined to the B.D., this should be distinctly stated ✓

No. and Material of Decks 3 D.Ks.

Official No. 164100 ; Signal Letters Is bottom of vessel coated with cement — — — — — if not give particulars of composition. Cement in peaks, in D.B. tanks in Mch. sp. & duct keel, elsewhere coated with boiled oil.

PARTICULARS OF WATER BALLAST.—

Where Fitted.	SALT		Where Fitted.	SALT	
	*Length. Feet.	Water Capacity. Tons.		*Length. Feet.	Water Capacity. Tons.
Double bottom, aft,	112.33	213	Fore peak tank,		84
Double bottom, under Engines and Boilers, F.W.	90.66	160	After peak tank,		132
Double bottom, if under Engines only,		✓	Deep tank, aft,		✓
Double bottom, if under Boilers only,		✓	Deep tank, forward,		✓
Double bottom, forward,	200.58	718	Other tanks, if fitted,		✓
	Total capacity of double bottom	1391	(If necessary, furnish further information by sketch.)		

* The wells are not to be included in the lengths of the tanks (See Circular No. 1284).

Order for Special Survey No. 3343

Date 1st November, 25.

Dates of Surveys held while building

(1935) Oct. 25-30 Nov. 1-5 & 12-24 Dec. 3-11-13-14-19-23-25-30 (1936) Jan. 8-14-22-25-29-31 Feb. 5-7-11-13-14-21-26-28 Mar. 4-6-11-13-16-18-19-23-25-26
APRIL 1-3-8-10-15-21-23-28-29 MAY 1-4-6-8-11-12-14-18-20-22-24-28 JUNE 1-5-8-16-18-24-29 JULY 16-21-24-28-29-31 AUG. 1-5-7-13-20-24 SEPT. 3-9-22-23
28-29 OCT. 2-5-14-21-26-28-30 NOV. 2

Total No. of Visits 96.