Rpt. 4. No. 20255

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 11 NOV 1936

Date of writing Report 3rd Nov. 19 36 When handed in at Local Office 4th Nov. 19 36 Port of GREENOCK.

No. in Reg. Book. Survey held at Greenock Date, First Survey 15th JUNE 1936 Last Survey 2nd Nov. 1936 (Number of Visits 27.)

73221 on the T.S.S. "CLAN MACAULAY" Tons Gross 10448 Net 6406

Built at Greenock By whom built The Greenock Dockyard Co. Ltd. Yard No. 425 When built 1936

Engines made at Wallsend-on-Tyne By whom made North Eastern Mar. Eng. Co Ltd Engine No. 2845 When made 1936

Boilers made at Do. By whom made Do. Boiler No. 2845 When made 1936

Registered Horse Power Owners The Clan Line Steamers Ltd. Port belonging to Glasgow

Nom. Horse Power as per Rule 1585 with L.P. Turbines Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

Trade for which Vessel is intended Foreign.

ENGINES, &c.—Description of Engines Triple expansion with Bauer-Wach L.P. Turbine & D.R. Gearing Revs. per minute 92

Dia. of Cylinders 26", 42" & 73" (Twin) Length of Stroke 48 No. of Cylinders 6 No. of Cranks 6

Crank shaft, dia. of journals as per Rule / as fitted Crank pin dia. Crank webs Mid. length breadth / Mid. length thickness shrunk Thickness parallel to axis / Thickness around eye-hole

Intermediate Shafts, diameter as per Rule / as fitted Swc. Rpt. 94145 Thrust shaft, diameter at collars as per Rule / as fitted

~~Tube Shafts~~, diameter as per Rule / as fitted Screw Shaft, diameter as per Rule / as fitted Is the tube / screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule / as fitted ✓ Thickness between bushes as per Rule / as fitted ✓ Is the after end of the liner made watertight in the propeller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner —

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓

If two liners are fitted, is the shaft lapped or protected between the liners ✓ Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No If so, state type — Length of Bearing in Stern Bush next to and supporting propeller —

Propeller, dia. ✓ Pitch ✓ No. of Blades 3 (each) Material Bronze whether Moveable yes Total Developed Surface — sq. feet

Feed Pumps worked from the Main Engines, No. ✓ Diameter — Stroke — Can one be overhauled while the other is at work —

Bilge Pumps worked from the Main Engines, No. — Diameter — Stroke — Can one be overhauled while the other is at work —

Feed Pumps: No. and size 2 @ 15½" × 11½" × 21" & 1 @ 14" × 10½" × 21" How driven Steam Steam

Pumps connected to the Main Bilge Line: No. and size 1 @ 10½" × 12½" × 21" & 1 @ 8" × 10½" × 15" How driven Steam Steam

Ballast Pumps, No. and size 1 @ 10½" × 12½" × 21" Lubricating Oil Pumps, including Spare Pump, No. and size 3 @ 8" × 9" × 18"

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room E.R. 2 @ 3½": 3 @ 3": Co Jordan 1 @ 2": Ble Rm. 2 @ 3½": Gutterway 1 @ 2": Tunnel Well 1 @ 2½"

In Pump Room ✓ In Holds, &c. No. 1 – 2 @ 3": No. 2 – 2 @ 3½": No. 3 – 2 @ 2¾": Fore Co Jordan 2 @ 2": O.F. Bunker 2 @ 3½": Aft Co Jordan 2 @ 2": Duct Keel 1 @ 2": X-Bunker 2 @ 3½": No. 4 – 2 @ 3": No. 5 – 1 @ 3".

Main Water Circulating Pump Direct Bilge Suctions, No. and size 2 @ 13". Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 5½" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight lead pipes to the bilges yes

Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Overboard Discharges above or below the deep water line both

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

What Pipes pass through the bunkers None How are they protected —

What pipes pass through the deep tanks None Have they been tested as per Rule —

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Upper deck level

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 20142 ft²

Is Forced Draft fitted yes No. and Description of Boilers Six single-ended Working Pressure 220 lb./in²

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Swc. Rpt. 94145.

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓

Is the donkey boiler intended to be used for domestic purposes only —

PLANS. Are approved plans forwarded herewith for Shafting ✓ (If not state date of approval) Main Boilers — Auxiliary Boilers — Donkey Boilers —

Superheaters ✓ General Pumping Arrangements yes Oil fuel Burning Piping Arrangements —

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes.

State the principal additional spare gear supplied

Swc. Rpt. 94145

The foregoing is a correct description,

Manufacturer.

NOTE.—The words which do not apply should be deleted. Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent?

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003958-003963-0154

Dates of Survey while building — During progress of work in shops - -

During erection on board vessel - - - (1936) JUNE 15. JULY 16 29. AUG. 3.4.5.6.11.12.14.21. SEPT. 3.4.8.14.21.23.25.28.30. OCT. 5.6.16.26.28. NOV. 2.

Total No. of visits 24.

Dates of Examination of principal parts— Cylinders ..... Slides ..... ~~Covers~~

Pistons ..... Piston Rods ..... Connecting rods .....

Crank shaft ..... Thrust shaft Awc. Rpt. 94145 ..... Intermediate shafts .....

Tube shaft ..... Screw shaft ..... Propeller .....

~~Stern tube~~ ..... Engine and boiler seatings { 23-9-36 / 24-7-36 ..... Engines holding down bolts 25-9-36

Completion of fitting sea connections 6-8-36 : Smallest distances — Boilers & Bunkers 9 ft. Boilers & tank tops 2'-3"

Completion of pumping arrangements 28-10-36 Boilers fixed 6-10-36 Engines tried under steam 2-11-36

Main boiler safety valves adjusted 16-10-36 Thickness of adjusting washers

	P.F.	C.F.	St.F.	P.A.	C.A.	St.A.
Sth.						
H.P.	13/64"	5/16"	5/16"	5/16"	4/32"	5/16"
St.V.	11/32"	5/16"	5/16"	9/32"	9/32"	21/64"
Supth.	5/16"	7/16"	5/16"	7/32"	7/16"	5/16.

Crank shaft material ..... Identification Mark ..... Thrust shaft material ..... Identification Mark .....

Intermediate shafts, material ..... Identification Marks ..... ~~Tube shaft, material~~ Awc. Rpt. 94145 ..... Identification Mark .....

Screw shaft, material ..... ~~Identification Mark~~ ..... Steam Pipes, material ..... Test pressure ..... Date of Test .....

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. yes

Have the requirements of the Rules for the use of oil as fuel been complied with yes

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with —

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with —

Is this machinery duplicate of a previous case yes If so, state name of vessel T.S.S. "PERTHSHIRE".

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines & Boilers have been properly fitted on board the vessel & Materials & workmanship are good. They have been tried under full power & found satisfactory.

This Machinery is eligible, in my opinion, to be classed in the Register Book with records:— ✠ LMC — 11.36 : T.5 — CL : and Notation — Fitted for oil fuel 11-36 F.P. above 150°F.

Enclosed herewith: Awc. Rpts. 94145 (3-off).

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

Certificate to be sent to 4/11/36

The amount of Entry Fee ... £ — : — :
1/5th Special ... ... £ ~~27 18/6~~
Donkey Boiler Fee See Awc. Rpt. ... £ — : — :
Travelling Expenses (if any) £ — : — :

When applied for, at Awc. 19

When received, 19

J. Boyle
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 10 NOV 1936

Assigned ✠ LMC 11.36 F.D.

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

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