

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office -2 SEP 1936
NEWCASTLE-ON-TYNE

Date of Report 31st Aug. 1936 When handed in at Local Office 31st Aug. 1936 Port of NEWCASTLE-ON-TYNE
 No. in Survey held at Newcastle-upon-Tyne Date, First Survey 7 Feb 1936 Last Survey 27.8. 1936
 Reg. Book. 7322 on the "CLAN MACAULAY"
 Built at Grenock By whom built Grenock Dockyard Co. Ltd. Yard No. 425 Tons Gross 10448 Net 6406
 Engines made at Wallsend-upon-Tyne By whom made North Eastern Marine Eng. Co. Ltd. Engine No. 2845 When made 1936
 Boilers made at Wallsend-upon-Tyne By whom made North Eastern Marine Eng. Co. Ltd. Boiler No. 2845 When made 1936
 Registered Horse Power 1585 Owners The Clan Line Steamers, Ltd. Port belonging to Glasgow
 { Nom. Horse Power as per Rule 1585 / Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes
 With L.P. Turbines
 Trade for which Vessel is intended

ENGINES, &c.—Description of Engines Twin Screws - Triple Expansion Revs. per minute 93
 Dia. of Cylinders 26"-42"-73" Length of Stroke 48" No. of Cylinders 6 No. of Cranks 6
 Crank shaft, dia. of journals as per Rule 14.54" Crank pin dia. 15 1/8" Crank webs Mid. length breadth 2'-2 1/2" Thickness parallel to axis 9 1/2"
 as fitted 15 1/8" Mid. length thickness 9 1/2" Thickness around eye-hole 7 9/16"
 Intermediate Shafts, diameter as per Rule 14.39" Thrust shaft, diameter at collars as per Rule See Report on L.P. Turbines
 as fitted 14 3/4" as fitted
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 15.85" Is the tube shaft fitted with a continuous liner yes
 as fitted as fitted 16 7/8" as fitted screw
 Bronze Liners, thickness in way of bushes as per Rule 32 13/32" Thickness between bushes as per Rule 18.8" Is the after end of the liner made watertight in the
 as fitted 16" as fitted 32 23/32" 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 one length
 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 full length
 If two liners are fitted, is the shaft lapped or protected between the liners no Is an approved Oil Gland or other appliance fitted at the after end of the tube
 shaft no If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 5'-11 1/2"
 Propeller, dia. 17'-6" Pitch Var. 19'-9" No. of Blades 3 Material Bronze whether Moveable yes Total Developed Surface 91 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4 3/4" Stroke 21" Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 3/4" Stroke 21" Can one be overhauled while the other is at work yes
 Feed Pumps { No. and size 2C 15 1/2" x 11 1/2" x 24" + One 14" x 10 1/2" x 22" Pumps connected to the { No. and size One 10 1/2" x 12 1/2" x 21" + One 8" x 10 1/2" x 15"
 How driven Steam Steam Main Bilge Line { How driven Steam Steam
 Ballast Pumps, No. and size One 10 1/2" x 12 1/2" x 21" Lubricating Oil Pumps, including Spare Pump, No. and size See Report on L.P. Turbines
 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 yes
 In Pump Room yes In Holds, &c. yes

Main Water Circulating Pump Direct Bilge Suctions, No. and size yes **Independent Power Pump Direct Suctions to the Engine Room Bilges,**
 No. and size yes 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 tail 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 yes
 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 yes
 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 yes How are they protected yes
 What pipes pass through the deep tanks yes Have they been tested as per Rule yes
 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 yes

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 20142 sq
 Is Forced Draft fitted yes No. and Description of Boilers Six Single Ended Working Pressure 220 lbs./sq
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes
 IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? yes
 Is the donkey boiler intended to be used for domestic purposes only yes
 PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes
 (If not state date of approval)
 Superheaters yes General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

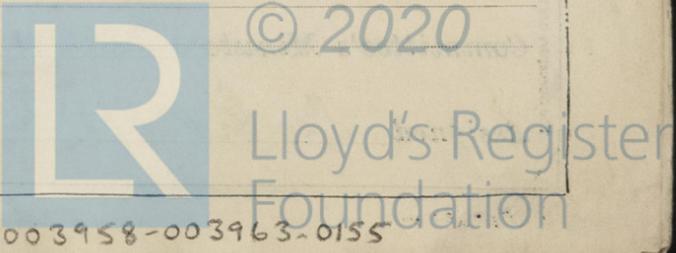
SPARE GEAR.

Has the spare gear required by the Rules been supplied yes
 State the principal additional spare gear supplied one propeller shaft; 2 right and 2 left hand propeller blades; one top and one bottom end bush; one set of H.P. piston rings for each engine; 12 air pump valves; one set of feed and bilge pump valves; one main and one donkey feed check valve; etc.

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO LTD
John Neill

Manufacturer.



NOTE.—The words which do not apply should be deleted.

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 During progress of work in shops -- 25.26.29 JUNE 2.4.5.8.10.15.16.18.22.29.30 JULY 12.3.6.7.8.9.10.11.13.14.15.16.20.21.24.
 Dates of Survey while building During erection on board vessel -- 27.28.30.31. AUG. 4.5.6.7.10.11.12.13.14.18.19.21.24.26.27.
 Total No. of visits 46.

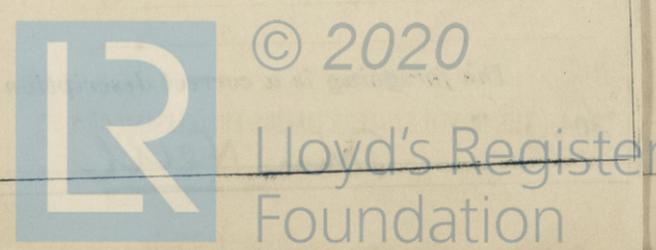
Dates of Examination of principal parts—Cylinders 15.6.36 to 11.7.36 Slides 22.6.36 to 11.7.36 Covers 15.6.36 to 11.7.36
 Pistons 22.6.36 to 11.7.36 Piston Rods 11.7.36 Connecting rods 11.7.36
 Crank shaft P 8.4.36 S 8.6.36 Thrust shaft See Report on L.P. Turbines Intermediate shafts 7.5.36 + 27.7.36
 Tube shaft — Screw shaft P 2.7.36 S 15.7.36 Apr 24.7.36 Propeller 24.7.36
 Stern tube S. 9.7.36 P 15.7.36 Engine and boiler seatings ✓ Engines holding down bolts ✓
 Completion of fitting sea connections ✓ Boilers fixed ✓ Engines tried under steam ✓
 Completion of pumping arrangements ✓ Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓
 Crank shafts material Steel Identification Mark P 2845 H.C.F. 8.4.36 Thrust shaft material L.P. Turbines Identification Mark —
 Intermediate shafts, material Steel Identification Mark 5926(2) H.C.F. 7.5.36; 5926(8) H.C.F. 27.7.36
 Screw shaft, material Steel Identification Mark P 5926 H.C.F. 27.7.36 Steam Pipes, material 40 Steel Test pressure 66 lbs/sq. Date of Test 24.7.36 to 19.8.36
 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? See Grk. Report
 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. "PERTSHIRE" Rpt. No. 93560

General Remarks (State quality of workmanship, opinions as to class, &c.)
 This machinery has been constructed under special survey in accordance with the Rules and approved plans; the materials and workmanship are good.
 The machinery is being forwarded to Greenock for instalment in the vessel.
 On instalment in the vessel, and after a satisfactory trial under working conditions, this machinery will be eligible, in my opinion, for classification, and to have the records L.M.C. (with date) - C.L. in the Register Book.

The amount of Entry Fee ... £ 6 : 0 : 0 When applied for,
 Special { JWC. 4/5 } ... £ 11 : 14 : 0 L.S.E.R. 936
 { Brk. 1/5 } ... £ 27 : 18 : 0
 Donkey Boiler Fee ... £ : : :
 Travelling Expenses (if any) £ : : :
 When received, 12.11.36
 M. Forster, Engineer Surveyor to Lloyd's Register of Shipping.
 Committee's Minute GLASGOW 10 NOV 1936
 Assigned See Grk. Rpt. No. 20155.

NEWCASTLE-on-TYNE

Committee to be sent to The Surveyors are requested to write on or below the space for Committee's Minute.



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