

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office JAN 24 1940

Date of Copying Report 17<sup>TH</sup> JANY. 1940 When handed in at Local Office 18<sup>TH</sup> JANY. 1940 Port of GREENOCK

No. in Survey held at GREENOCK. Date, First Survey 10<sup>TH</sup> APRIL 1939. Last Survey 17<sup>TH</sup> JANUARY 1940

Reg. Book. on the TEMPLE ARCH. (Number of Visits 63.) Tons { Gross 5138.19 Net 3039.37

Built at PORT GLASGOW By whom built MESSRS. LITHGOWS LD. Yard No. 929. When built 1940-1

Engines made at GREENOCK By whom made MESSRS. RANKIN & BLACKMORE LD. Engine No. 462. When made 1940

Boilers made at .. By whom made .. Boiler No. 462. When made 1940

Registered Horse Power Owners TEMPLE. S. S. CO. LD. Port belonging to LONDON.

Nom. Horse Power as per Rule 482. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted YES

Trade for which Vessel is intended FOREIGN.

**ENGINES, &c.**—Description of Engines **TRIPLE EXPANSION** Revs. per minute **75**  
 Dia. of Cylinders **22½" - 36" - 65"** Length of Stroke **48"** No. of Cylinders **3** No. of Cranks **3**  
 Crank shaft, dia. of journals as per Rule **13.44"** as fitted **13.75"** Crank pin dia. **13.75"** Crank webs Mid. length breadth **20.9"** Thickness parallel to axis **8.5"**  
 Intermediate Shafts, diameter as per Rule **12.8"** as fitted **13.125"** Thrust shaft, diameter at collars as per Rule **13.44"** as fitted **13.75"**  
 Tube Shafts, diameter as per Rule .. as fitted .. Screw Shaft, diameter as per Rule **14.32"** as fitted **14.75"** Is the **tube** shaft fitted with a continuous liner **Yes**  
 Bronze Liners, thickness in way of bushes as per Rule **.736"** as fitted **.75"** Thickness between bushes as per Rule **.552"** as fitted **.625"** 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 **59.5"**

Propeller, dia. **18-3"** Pitch **17-3" (MAX)** No. of Blades **4** Material **BRONZE** whether Moveable **No** Total Developed Surface **108** 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. **2** Diameter **4.5"** Stroke **27"** Can one be overhauled while the other is at work **YES**  
 Feed Pumps { No. and size **3 (7"-9.5" x 21") (6"-4.5" x 6") (8"-5" x 8")** Pumps connected to the { No. and size **ONE. 9"-12" x 12"**  
 How driven **STEAM.** Main Bilge Line How driven **STEAM.**

Ballast Pumps, No. and size **ONE. 9"-12" x 12"** Lubricating Oil Pumps, including Spare Pump, No. and size ..  
 Are two independent means arranged for circulating water through the Oil Cooler .. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **ONE. 2¾" E.R. STARD.** **2.-2¾" E.R. PORT.**  
 In Pump Room .. In Holds, &c. **NO 1 2-3" DIA.** **NO 2.-2-3½" DIA.** **CROSS BUNKER 2-2½" DIA.**

TUNNEL. **ONE.-2" DIA.** **NO 3. 2-3" DIA.** **NO 4. 2-3" DIA.** TUNNEL WELL. **ONE.-2½" DIA.**  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size **ONE. 4¾" DIA.** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ..  
 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 **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 **MAIN. BELOW OTHERS ABOVE**  
 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 **BILGE SUCTIONS** How are they protected **WOOD CASING**  
 What pipes pass through the deep tanks .. 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 **TOP E.R. PLATFORM.**

**MAIN BOILERS, &c.**—(Letter for record **5**.) Total Heating Surface of Boilers (MAIN. 5509. AUXLY. 1576) TOTAL. 7084 sq. ft.  
 Which Boilers are fitted with Forced Draft **2 MAIN & AUXLY.** Which Boilers are fitted with Superheaters **2 MAIN.**  
 No. and Description of Boilers **2 MAIN & ONE AUXLY. SINGLE ENDED** Working Pressure **230 lbs/sq"**

IS A REPORT ON MAIN BOILERS NOW FORWARDED? **YES**  
 IS A DONKEY BOILER FITTED? **No** If so, is a report now forwarded? ..  
 Can the donkey boiler be used for domestic purposes only ..

**PLANS.** Are approved plans forwarded herewith for Shafting **YES**. Main Boilers **YES**. Auxiliary Boilers **YES**. Donkey Boilers ..  
 Superheaters **N.E.M. APPROVED TYPE.** 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 **PROPELLER SHAFT. FITTED WITH CONTINUOUS LINER.**  
 MARK ON SHAFT. **NO 8745**  
**M.C. 6.12.39.**

The foregoing is a correct description.  
RANKIN & BLACKMORE, LTD.,

*H. J. ...* Managing Director. Manufacturer.



004430-004458-0102

(1939) APRIL 10. 13. MAY 5. 10. 12. 14. 23. 26. 31. JUNE 2. 6. 9. 13. 15. 19. 22. 26. JULY 12. 14. 20. 24. 31. AUGUST 2. 4. 11. 14. 15. 17. 24. 29. 31. SEPT 5. 12. 13. 18. 28. OCT 6. 12. 14. 24. 31. NOV. 10. 15. 14. 22. 24. 28. 29. 30. DEC. 1. 6. 12. 15. 18. 19. 22. 26. 29.

(1940) JAN. 9. 10. 12. 14.

Dates of Survey while building

Total No. of visits 63

Dates of Examination of principal parts—Cylinders HP. 8.4.39 MP. 20.7.39 Slides 12.9.39 Covers 13.9.39  
 Pistons 29.8.39 Piston Rods 31.8.39 Connecting rods 31.8.39  
 Crank shaft 4.8.39 Thrust shaft 31.8.39 Intermediate shafts 6.10.39  
 Tube shaft / Screw shaft 13.11.39 Propeller 13.11.39  
 Stern tube 10.11.39 Engine and boiler seatings 27.11.39 Engines holding down bolts 12.12.39

Completion of fitting sea connections 27/11/39  
 Completion of pumping arrangements 17/1/40 Boilers fixed 6.12.39 Engines tried under steam 29.12.39  
 Main boiler safety valves adjusted 29.12.39 Thickness of adjusting washers Port S.  $\frac{13}{32}$  Supht.  $\frac{3}{8}$  STAR  $\frac{13}{32}$  Supht.  $\frac{11}{32}$  AUXLY  $\frac{3}{32}$  NO 8745  
 Crank shaft material S.M. STEEL Identification Mark M.C. 4.8.39 No 8604 Thrust shaft material S.M. STEEL Identification Mark M.C. 31.8.39 No 8745  
 Intermediate shafts, material S.M. STEEL Identification Marks M.C. 6.10.39 No 8745 Tube shaft, material / Identification Mark /  
 Screw shaft, material S.M. STEEL Identification Mark M.C. 13.11.39 Steam Pipes, material S.D. STEEL Test pressure 690 lb/sq. in. Date of Test 14.11.39 To 27.12.39  
 Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150°F. /  
 Have the requirements of the Rules for the use of oil as fuel been complied with /  
 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 No  
 Is this machinery duplicate of a previous case YES If so, state name of vessel DORNOCH. *Glenpark*

**General Remarks** (State quality of workmanship, opinions as to class, &c. These engines and boilers have been built under Special Survey, in accordance with the approved plans. The materials and workmanship are good. They have now been securely fitted in the Vessel, tried under steam and found satisfactory.  
 The machinery is eligible, in my opinion, for the record of:  
 ✦ L.M.C. 1.40. T.S.-C.L. and the Notation of 2.S.B. (Spt) and one Auxly.

Certificate to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 5 : 0 :  
 Special ... £ 97 : 6 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 1940 JAN 19 1940.  
 When received, 7/2/1940 J.

M. Caldwell.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 23 JAN 1940**  
 Assigned -/- Linc 1.40  
 2 S.B (Spt) 1 Auxly

