

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 19 30 When handed in at Local Office 8 Port of GLASGOW  
 No. in Survey held at GLASGOW Date, First Survey 1st Dec 1942 Last Survey 17th Aug. 1943  
 Reg. Book GLASGOW (Number of Visits 43)  
 on the S/S "EMPIRE DARING" Tons {Gross 7059 Net 4801  
 Built at PT GLASGOW By whom built WM. HAMILTON & CO. LD. Yard No. 459 When built 1943  
 Engines made at GLASGOW By whom made DAVID ROWAN & CO. LD. Engine No. 1127 When made 1943  
 Boilers made at -DO- By whom made -DO- Boiler No. 1124 When made 1943  
 Registered Horse Power \_\_\_\_\_ Owners The Admiralty Port belonging to Greenock  
 Nom. Horse Power as per Rule 509 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES  
 Trade for which vessel is intended \_\_\_\_\_

ENGINES, &c.—Description of Engines TRIPLE EXPANSION Revs. per minute 76  
 Dia. of Cylinders 24 1/2" - 39" - 70" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals 14" as per Rule 14" Crank pin dia. 14 3/4" Mid. length breadth 27 1/2" Thickness parallel to axis 9"  
 as fitted 14 1/4" Crank webs 9" shrunk Thickness around eye-hole 6 3/8"  
 Intermediate Shafts, diameter 13 5/8" as per Rule 14" Thrust shaft, diameter at collars 14 1/4" as fitted 14 1/4"  
 Tube Shafts, diameter \_\_\_\_\_ as per Rule \_\_\_\_\_ Screw Shaft, diameter 14 8/5" as fitted 15 1/4" Is the screw shaft fitted with a continuous liner YES  
 as fitted \_\_\_\_\_ as fitted \_\_\_\_\_  
 Bronze Liners, thickness in way of bushes 3/4" as per Rule 3/4" Thickness between bushes 9/16" as per Rule 9/16" Is the after end of the liner made watertight in the propeller boss YES  
 as fitted 13/16" as fitted 3/4"  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner YES  
 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 YES  
 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 \_\_\_\_\_  
 at NO If so, state type \_\_\_\_\_ Length of Bearing in Stern Bush next to and supporting propeller 5' 1"  
 Propeller, dia 18' 3" Pitch 16' 6" No. of Blades 4 Material C.S. whether Moveable NO Total Developed Surface 110 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" Stroke 27" Can one be overhauled while the other is at work YES  
 Feed Pumps { No. and size 2 @ 10 1/2" x 8" x 22" Pumps connected to the Main Bilge Line { No. and size Ballast Pump 200 tons/hr. G.S. Pump 30 tons/hr.  
 How driven steam How driven steam  
 Ballast Pumps, No. and size 1 @ 200 tons/hr. 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 4 @ 3" 1 @ 2 1/2" in Cofferdam  
 In Pump Room YES In Holds, &c. Nos 1, 2 & 3 holds 2 @ 3" H. 2 @ 3 1/2"  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 10" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 5"  
 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, main inlet on machinery 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 \_\_\_\_\_ How are they protected \_\_\_\_\_  
 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 NO worked from \_\_\_\_\_

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7268  
 Which Boilers are fitted with Forced Draft All Which Boilers are fitted with Superheaters All  
 No. and Description of Boilers 3 S.E. Working Pressure 220 lb.  
 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 \_\_\_\_\_

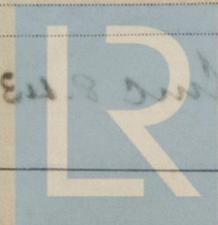
PLANS. Are approved plans forwarded herewith for Shafting \_\_\_\_\_ Main Boilers \_\_\_\_\_ Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_  
 (If not state date of approval)  
 Superheaters \_\_\_\_\_ General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements \_\_\_\_\_

### SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes  
 State the principal additional spare gear supplied List Attached

The foregoing is a correct description.

Walter Mackenzie, For David Rowan & Co. Ltd. Manufacturer.



© 2020

Lloyd's Register Foundation

054906 004913-0037

1942 Dec 1. 11. 18. 23. 30 1943 Jan 8. 11. 18. 25. 27. 28 Feb 1. 12. 17. 24. 26 Mar 8. 9. 12. 16. 17. 19. 22. 23. 25. 30  
 During progress of work in shops -- May 10. 11. 17. 20. 24. 26 Jun 21. 28. 29. 30. 1. 2. 3. 4. 5. 9. 13. 14. 16 Aug 5. 6. 9. 17  
 Dates of Survey while building  
 During erection on board vessel --  
 Total No. of visits 43

Dates of Examination of principal parts—Cylinders 22-3-43 Slides 22-3-43 Covers 22-3-43  
 Pistons 24-5-43 Piston Rods 24-5-43 Connecting rods 19-3-43  
 Crank shaft 26-2-43 Thrust shaft 8-3-43 Intermediate shafts 8-3-43  
 Tube shaft — Screw shaft 11-5-43 Propeller 11-5-43  
 Stern tube 26-5-43 Engine and boiler seatings 22-6-43 GRK. Engines holding down bolts 27-7-43  
 Completion of fitting sea connections 22-6-43 GRK.  
 Completion of pumping arrangements 9-8-43 Boilers fixed 27-7-43 Engines tried under steam 17-8-43  
 Main boiler safety valves adjusted 6-8-43 Thickness of adjusting washers P.C. 5/16" pro Supt. 9/32 5 3/8" pro 5/16"  
 Crank shaft material SM. steel Identification Mark 11923ATB Thrust shaft material SM. steel Identification Mark 11923ATB  
 Intermediate shafts, material SM. steel Identification Marks 11923ATB + test no. Tube shaft, material — Identification Mark —  
 Screw shaft, material SM. steel Identification Mark 11923ATB + test no. Steam Pipes, material SM. steel Test pressure 660 lb. Date of Test July 1943  
 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 —  
 Is this machinery duplicate of a previous case Yes If so, state name of vessel "EMPIRE TRUMPET" No Reg. 670

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 This machinery has been built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. It has been satisfactorily installed in the vessel, tested under working conditions and, in my opinion, is eligible to be classed with record + LMC 8, 43 and notation CL  
 The Specification requirements have been carried out satisfactorily.

The amount of Entry Fee ... £ 6 : 9 :  
 Special ... £ 100 : 5 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ 25 : 2 :  
 When applied for, 31 AUG 1943  
 When received, 19

*M. J. Brown*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute ... GLASGOW 31 AUG 1943  
 Assigned ... + LMC 8.43



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