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Rpt. 4.

No. 68260

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 1944 When handed in at Local Office 1.4.1944 Port of Glasgow  
 No. in Survey held at Glasgow & Grangemouth Date, First Survey 12.5.43 Last Survey 30.3.1944  
 Reg. Book (Number of Visits 43)  
 on the S.S. "EMPIRE PYM" Tons { Gross 2340 Net 1281  
 Built at Grangemouth By whom built Grangemouth Dockyard Co. Ltd Yard No. 448 When built 1944  
 Engines made at Glasgow By whom made David Rowan & Co. Ltd Engine No. 1126 When made 1944  
 Boilers made at -do- By whom made -do- Boiler No. 1140 When made 1944  
 Registered Horse Power Owners The Ministry of War Transport Port belonging to Grangemouth  
 Nom. Horse Power as per Rule 242 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which vessel is intended International

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 86½  
 Dia. of Cylinders 18"-31"-52 Length of Stroke 39" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 10.653" as fitted 10¾" Crank pin dia. 10¾" Mid. length breadth 21" Thickness parallel to axis 6¾" Crank webs shrunk Mid. length thickness 6¾" Thickness around eye-hole 4½"  
 Intermediate Shafts, diameter as per Rule 10.145" as fitted none Thrust shaft, diameter at collars as per Rule 10.653" as fitted 10¾"  
 Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 11.311" as fitted 11½" Is the tube screw shaft fitted with a continuous liner Yes  
 Bronze Liners, thickness in way of bushes as per Rule 6.42" as fitted 11/16" Thickness between bushes as per Rule 48" as fitted 5/8" 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 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 Yes 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 3'-10"  
 Propeller, dia. 14'-0" Pitch 14'-0" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 64 sq. feet  
 Feed Pumps worked from the Main Engines, No. none Diameter Stroke Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 3½" Stroke 21" Can one be overhauled while the other is at work Yes  
 Feed Pumps { No. and size 2 @ 8½"-6" x 18" Pumps connected to the Main Bilge Line { No. and size General service one @ 7"-8" x 18" How driven Steam How driven Steam  
 Ballast Pumps, No. and size none in E.R. 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 3 @ 2½" & one @ 2" In Pump Room One @ 4" In Holds, &c. none

Main Water Circulating Pump Direct Bilge Suctions, No. and size one @ 6" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one @ 4" 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 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 No tunnel Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record (S) ) Total Heating Surface of Boilers 3360 f Which Boilers are fitted with Forced Draft Main Which Boilers are fitted with Superheaters none  
 No. and Description of Boilers One S.E. Working Pressure 220 LBS/SQ. IN.  
 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 Donkey Boilers  
 (If not state date of approval)  
 Superheaters General Pumping Arrangements 30-11-43 & 10-12-43 Oil fuel Burning Piping Arrangements 30-11-43

## 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.

For David Rowan & Co. Ltd.  
 Archd. H. Grierson, Manufacturer.



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Dates of Survey while building  
During progress of work in shops - - 1943 May 12-17 Jun 4-15-17 21 July 1-6 7-13-16 28-30 31 Aug 18-23 Sep 9-10-15-17  
During erection on board vessel - - - Oct 8-11-27 Nov 1-10-18 Dec 1-9-25 1944 Jan 11-14-20-21-25 Feb 9-10-24-26-29 Mar 14-24-27-30  
Total No. of visits 43

Dates of Examination of principal parts—Cylinders 17-5-43 Slides 28-7-43 Covers 28-7-43  
Pistons 8-10-43 Piston Rods 8-10-43 Connecting rods 18-8-43  
Crank shaft 15-6-43 Thrust shaft 16-7-43 Intermediate shafts ✓  
Tube shaft ✓ Screw shaft 15-9-43 Propeller 15-9-43  
Stern tube 10-11-43 Engine and boiler seatings 27-11-43 Engines holding down bolts 29-12-43  
Completion of fitting sea connections 27-11-43

Completion of pumping arrangements 10-3-44 Boilers fixed 27-11-43 Engines tried under steam 10-3-44  
Main boiler safety valves adjusted 8-3-44 Thickness of adjusting washers FOR  $2\frac{3}{4}$ " AFT  $2\frac{3}{2}$ "  
Crank shaft material S.M. Steel Identification Mark 11929 A.J.B. Thrust shaft material S.M. Steel Identification Mark 11929 A.J.B.  
Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓  
Screw shaft, material S.M. Steel Identification Mark 11929 A.J.B. Steam Pipes, material S.M. Steel Test pressure 660 LBS/sq Date of Test January 1944  
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 ✓ 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. No If so, state name of vessel ✓

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 our opinion, is eligible to be classed with record L.M.C. 3,44 and notation C.L. Fitted for oil fuel 3,44 F.P. above 150°F. The Specification requirements have been carried out satisfactorily.

Glasgow  
Certificate to be sent to

The amount of Entry Fee ... £ 4 : 0 : 0 When applied for, 4 APR 1944  
Special SPECIFICATION FEE £ 60 : 10 : 0  
Donkey Boiler Fee ... £ 15 : 2 : 0 When received,  
Travelling Expenses (if any) £ : : 19

Geo. Stevenson & M. Sale  
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 4 APR 1944

Assigned -1- Lmc 3,444

Fitted for oil fuel 3,444  
F.P. above 150°F