

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office AUG 25 1937

Date of writing Report 19 21. 8. 37 When handed in at Local Office 21. 8. 37 Port of Glasgow  
 No. in Survey held at 6 Bank Bowling Date, First Survey 12. July 1937 Last Survey 14. Aug 1937  
 Reg. Book on the S. S. "Opreus" (Number of Visits 33) Gross 362 Tons Net 131  
 Built at Bowling By whom built Scott & Sons Ltd. Yard No. 342 When built 1937.  
 Engines made at Clydebank By whom made Aitchison Blair Ltd. Engine No. 209 When made "  
 Boiler made at Glasgow By whom made D. Howan & Co. Ltd. Boiler No. B430 When made "  
 Registered Horse Power Owners Frontier Town SS Co Ltd. Port belonging to Newry  
 Nom. Horse Power as per Rule 79 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Trade for which Vessel is intended Coasting

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute 130  
 Dia. of Cylinders 11 1/4 - 20 - 32 Length of Stroke 24 No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as fitted 6 5/8 Crank pin dia. 6 5/8 Crank webs Mid. length breadth 4 5/16 Thickness parallel to axis 4 5/16  
 Intermediate Shafts, diameter as per Rule none Thrust shaft, diameter at collars as fitted 6 5/8  
 Tube Shafts, diameter as per Rule none Screw Shaft, diameter as fitted 7 1/4 Is the shaft fitted with a continuous liner yes  
 Bronze Liners, thickness in way of bushes as per Rule 19/32 Thickness between bushes as fitted 19/32 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 One length 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 If so, state type  
 Propeller, dia. 9' 0" Pitch 9' 3" No. of Blades 4 Material C.C. whether Movable yes Total Developed Surface 28 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2" Stroke 12 1/2" Can one be overhauled while the other is at work yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2" Stroke 12 1/2" Can one be overhauled while the other is at work yes  
 Feed Pumps No. and size 1-5 1/2 x 3 1/2 x 6 Duplex Pumps connected to the Main Bilge Line No. and size 1- Ballast 6 1/4 x 5 x 6 Duplex How driven Steam  
 Ballast Pumps, No. and size 1-6 1/4 x 5 x 6 Duplex Lubricating Oil Pumps, including Spare Pump, No. and size none  
 Are two independent means arranged for circulating water through the Oil Cooler none Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room 2-2", 1-2 1/2" In Pump Room none In Holds, &c. No. 1 Hold, 3-2 1/4"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-3 1/2 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2  
 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 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 Above 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 bunks No. 1 Hold Bilge Suctions How are they protected Wood ceiling  
 What pipes pass through the deep tanks none 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 none Is it fitted with a watertight door worked from yes

MAIN BOILERS, &c.—(Letter for record S. ✓) Total Heating Surface of Boilers 1489 sq. ft. ✓  
 Is Forced Draft fitted no No. and Description of Boilers 1- Multitubular Working Pressure 205  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes  
 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 15-1-37 Main Boilers yes Auxiliary Boilers ✓ Donkey Boilers ✓  
 Superheaters none General Pumping Arrangements Copy "Pivot" Oil fuel Burning Piping Arrangements Coal

## SPARE GEAR.

Has the spare gear required by the Rules been supplied yes  
 State the principal additional spare gear supplied nil

The foregoing is a correct description,

AITCHISON, BLAIR, LIMITED.

Arch Blair

Manufacturer.



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1937 Feb: 12. 23 Mar: 2. 11. 16. 25. 31 Apr: 7. 20. 28 May: 10. 14. 18. 24  
During progress of work in shops - - 26 June: 2. 8. 11. 16. 22. 24 July: 1. 13. 28 Aug: 17  
Dates of Survey while building During erection on board vessel - - - 1937 Mar: 19 Apr: 12 May: 7 June: 8. 28 July: 30 Aug: 10. 14  
Total No. of visits 33

Dates of Examination of principal parts—Cylinders 2-3-37 cl Slides 16-6-37 cl Covers 28-4-37 cl  
Pistons 10-5-37 cl Piston Rods 28-4-27 cl Connecting rods 31-3-37 cl  
Crank shaft 2-3-37 cl Thrust shaft 31-3-37 cl Intermediate shafts none  
Tube shaft ✓ Screw shaft 16-6-37 cl Propeller 10-5-37 cl  
Stern tube 16-6-37 cl Engine and boiler seatings 12-4-37 Engines holding down bolts 30-7-37  
Completion of fitting sea connections 8-6-37  
Completion of pumping arrangements 10-8-37 Boilers fixed 30-7-37 Engines tried under steam 14-8-37  
Main boiler safety valves adjusted 14-8-37 Thickness of adjusting washers P 7 1/2 S 15/32  
Crank shaft material 8 Identification Mark 144 Thrust shaft material 8 Identification Mark 144  
Intermediate shafts, material none Identification Marks Tube shaft, material ✓ Identification Mark ✓  
Screw shaft, material 8 Identification Mark 193 Steam Pipes, material Copper Test pressure 410 Date of Test 30-7-37  
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 not desired ✓  
Is this machinery duplicate of a previous case yes If so, state name of vessel "Trivet" S.S. report N° 57570

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been built under special survey in accordance with the approved plan and the Society's Rules and requirements the materials and workmanship are good, it has been securely fitted on board, and satisfactorily tried under steam and in our opinion is eligible for the record + L.M.C. 8-37.

21/8/37

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for,  
Special ... £ 11 : 17 : 0 23 AUG 1937  
Donkey Boiler Fee ... £ : : : When received,  
Travelling Expenses (if any) £ : : : 7.10 19.37

Committee's Minute GLASGOW 24 AUG 1937

Assigned + L.M.C. 8.37

Jas. Cairns, M. Dale  
Engineer Surveyor to Lloyd's Register of Shipping.



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