

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 19 45 When handed in at Local Office 3 1. 1945 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 28. 8. 44 Last Survey Dec. 21<sup>st</sup> 1944  
 Reg. Book 16 (Number of Visits 16) Tons { Gross 7201  
 Net 4935  
 on the S.S. "EMPIRE KUMASI"  
 Built at Port Glasgow By whom built Messrs Wm Hamilton & Co. Ltd Yard No. 465 When built 1944  
 Engines made at Glasgow By whom made Fairfield S.B. & E. Co. Ltd Engine No. 699 ✓ When made 1943  
Messrs John Brown & Co. Ltd 464 ✓  
 Boilers made at Glasgow By whom made Messrs David Rowan & Co. Ltd Boiler No. 1163 ✓ When made 1944  
 Registered Horse Power \_\_\_\_\_ Owners The Ministry of War Transport Port belonging to Greenock  
 Net Horse Power as per Rule 558 ✓ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which vessel is intended International

**FINES, &c.—Description of Engines.** Triple Expansion Revs. per minute \_\_\_\_\_  
 No. of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ No. of Cranks \_\_\_\_\_  
 Crank shaft, dia. of journals \_\_\_\_\_ Mid. length breadth \_\_\_\_\_ Thickness parallel to axis \_\_\_\_\_  
 as per Rule \_\_\_\_\_ Crank pin dia. \_\_\_\_\_ Crank webs \_\_\_\_\_ shrunk \_\_\_\_\_  
 as fitted \_\_\_\_\_ Mid. length thickness \_\_\_\_\_ Thickness around eye-hole \_\_\_\_\_  
 Intermediate Shafts, diameter \_\_\_\_\_ Thrust shaft, diameter at collars \_\_\_\_\_  
 as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_  
 as fitted \_\_\_\_\_  
 Tube Shafts, diameter \_\_\_\_\_ Screw Shaft, diameter \_\_\_\_\_ Is the { tube } shaft fitted with a continuous liner {  
 as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ screw }  
 as fitted \_\_\_\_\_  
 Bronze Liners, thickness in way of bushes \_\_\_\_\_ Thickness between bushes \_\_\_\_\_ Is the after end of the liner made watertight in the  
 as fitted \_\_\_\_\_  
 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 pieces 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  
 at \_\_\_\_\_ If so, state type \_\_\_\_\_ Length of Bearing in Stern Bush next to and supporting propeller \_\_\_\_\_  
 Propeller, dia. 17'-6" / Pitch 16'-9" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 108 sq. feet  
 Main Engines, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 Bilge Pumps worked from the Main Engines, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 Feed Pumps worked from the Main Engines, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 Pumps connected to the Main Bilge Line { No. and size Ballast Pump, Gen. Service Pumps. ✓  
 How driven Steam How driven Steam. Steam. ✓  
 Ballast Pumps, No. and size One @ 10"-12" x 12" ✓ Lubricating Oil Pumps, including Spare Pump, No. and size \_\_\_\_\_  
 Are there 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 @ 3" ✓  
 In Pump Room \_\_\_\_\_ In Holds, &c. No. 1 hold 2 @ 3": No. 2 hold 2 @ 3": No. 3 hold 2 @ 3"  
No. 4 hold 2 @ 2": No. 5 hold 2 @ 2": Hold well one @ 3", Tunnel well one @ 2 1/2"  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 10" ✓ Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size one @ 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 ✓ 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 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 Yes ✓ Is it fitted with a watertight door No worked from \_\_\_\_\_

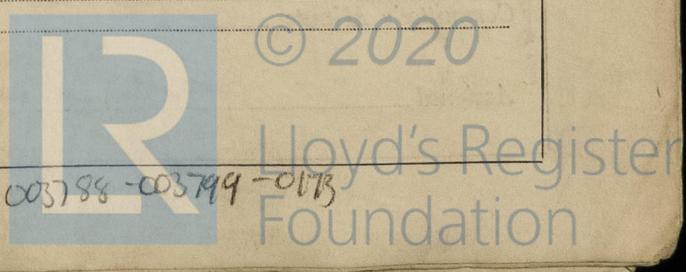
**MAIN BOILERS, &c.—** (Letter for record S) Total Heating Surface of Boilers 8336 ✓  
 Which Boilers are fitted with Forced Draft all ✓ Which Boilers are fitted with Superheaters P. & S. wing boilers ✓  
 No. and Description of Boilers 3 S.B. 2 S.B. + 1 aux S.B. Working Pressure 220 lbs/0" ✓  
**IS 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 as approved for Standard Engines Main Boilers \_\_\_\_\_ Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_  
 (If not state date of approval) \_\_\_\_\_  
 Superheaters \_\_\_\_\_ ✓ General Pumping Arrangements \_\_\_\_\_ Oil fuel Burning Piping Arrangements \_\_\_\_\_ ✓  
 Steam, Exhaust, Feed & Drain Pipes herewith. Bilge & Ballast approved 6-10-44

### SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes ✓  
 State the principal additional spare gear supplied See list attached.

The foregoing is a correct description.

For David Rowan & Co. Ltd Manufacturer.  
Arch. H. Grierson



003788-003799-0173

During progress of work in shops - - - - -  
 Dates of Survey while building  
 During erection on board vessel - - - - - *1944 Aug 28 Sep 8 Oct 25-27 31 Nov 7-25-28 Dec 1-2-4-5-12-18-21*  
 Total No. of visits *16*

Dates of Examination of principal parts—Cylinders ✓ Slides ✓ Covers ✓  
 Pistons ✓ Piston Rods ✓ Connecting rods ✓  
 Crank shaft ✓ Thrust shaft ✓ Two Intermediate shafts *2-10-44*  
 Tube shaft ✓ Screw shaft *28-8-44* Propeller *28-8-44*  
 Stern tube *5-10-44* Engine and boiler seatings *7-11-44* Engines holding down bolts *28-11-44*  
 Completion of fitting sea connections *27-10-44*

Completion of pumping arrangements *12-12-44* Boilers fixed *12-12-44* Engines tried under steam *21-12-44*  
 Main boiler safety valves adjusted *12-12-44* Thickness of adjusting washers

Crank shaft material ✓ Identification Mark ✓ Thrust shaft material ✓ Identification Mark ✓  
 Two Intermediate shafts, material *S.M. Steel* Identification Mark *LLOYDS 13613 J.S. - Supplied by D. Rowan & Co*  
 Screw shaft, material *S.M. Steel* Identification Mark *LLOYDS 10906 J.S. - Supplied by Fairfield ex. Admiralty Stock*  
 Steam Pipes, material *S.* ✓ Test pressure *660 LBS/SQ* Date of Test *Dec. 1944*

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 ✓ 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 PENNANT" Glas. Rept. No 6646*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery has been efficiently installed in the vessel, tested under full load & in my opinion is eligible to be classed with record \*L.M.C. 12,44 and notation C.L. The specification requirements have been carried out satisfactorily.*

Certificate to be sent to *Glasgow*

|                              |   |    |    |                   |
|------------------------------|---|----|----|-------------------|
| The amount of Entry Fee      | £ | :  | :  | When applied for, |
| Balance Special              | £ | 30 | 8  | 21/5 1945         |
| Specification                | £ | 7  | 12 |                   |
| Donkey Boiler Fee            | £ | :  | :  |                   |
| Travelling Expenses (if any) | £ | :  | :  | When received, 19 |

*Geo. Stevenson*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW** 4 JAN 1945  
 Assigned *Luc 12.44*

