

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

21 SEP 1927

Writing Report 9/8/27 When handed in at Local Office 1027 Port of Greenock  
 Survey held at Greenock Date, First Survey 11th July 1924 Last Survey 13th Sept 1924  
 took on the T/S Tug "Lakej" (Number of Visits 20) Tons { Gross 283  
 at Greenock By whom built Harland & Wolff L<sup>o</sup> Yard No. 796 When built 1927  
 es made at Belfast By whom made ditto Engine No. 796 when made 1927  
 s made at ditto By whom made ditto Boiler No. 796 when made 1927  
 lered Horse Power \_\_\_\_\_ Owners P & O Steam Nav Co Ltd Port belonging to Aden  
 Horse Power as per Rule 145 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

INES, &c.—Description of Engines Triple Expansion 2 Stk  
 of Cylinders 32-23 1/2-36 Length of Stroke 27 Revs. per minute 120 No. of Cylinders 6 No. of Cranks 6  
 of Crank shaft journals as per rule \_\_\_\_\_ Dia. of Crank pin \_\_\_\_\_ Crank webs \_\_\_\_\_ Mid. length breadth \_\_\_\_\_ Thickness parallel to axis \_\_\_\_\_  
 as fitted \_\_\_\_\_ Mid. length thickness \_\_\_\_\_ shrunk \_\_\_\_\_ Thickness around eye-hole \_\_\_\_\_  
 eter of Thrust shaft under collars as per rule \_\_\_\_\_ Diameter of Tunnel shaft as per rule \_\_\_\_\_ Diameter of Screw shaft as per rule \_\_\_\_\_ Is the Screw shaft  
 as fitted \_\_\_\_\_ as fitted \_\_\_\_\_ as fitted \_\_\_\_\_  
 with a continuous liner the whole length of the stern tube \_\_\_\_\_ Is the after end of the liner made watertight in the propeller boss \_\_\_\_\_  
 e liner is in more than one length are the joints burned \_\_\_\_\_ If the liner does not fit tightly at the part \_\_\_\_\_  
 en the bearings in the stern tube, is the space charged with plastic material insoluble in water and non-corrosive \_\_\_\_\_  
 o liners are fitted, is the shaft lapped or protected between the liners \_\_\_\_\_ Is an approved appliance fitted at the after end of the shaft to permit  
 being efficiently lubricated \_\_\_\_\_ Length of Stern Bush \_\_\_\_\_ Diameter of Propeller \_\_\_\_\_  
 h of Propeller \_\_\_\_\_ No. of Blades \_\_\_\_\_ State whether Moveable \_\_\_\_\_ Total Surface \_\_\_\_\_ square feet.  
 of Feed Pumps fitted to the Main Engines \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 of Bilge Pumps fitted to the Main Engines \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 al number and size of power driven Feed and Bilge Auxiliary Pumps \_\_\_\_\_  
 and size of Pumps connected to the Main Bilge Line \_\_\_\_\_  
 and size of Ballast Pumps \_\_\_\_\_ No. and size of Lubricating Oil Pumps, including Spare Pump \_\_\_\_\_  
 e two independent means arranged for circulating water through the Oil Cooler \_\_\_\_\_ No. and size of suction connected to both Main Bilge Pumps and Auxiliary  
 lge Pumps;—In Engine and Boiler Room \_\_\_\_\_ and in Holds, &c. \_\_\_\_\_

o. and size of Main Water Circulating Pump Bilge Suctions one 6" No. and size of Donkey Pump Direct Suctions \_\_\_\_\_  
 the Engine Room Bilges one 2 1/2" Are all the Bilge Suction Pipes in holds and \_\_\_\_\_ fitted with strum-boxes yes  
 re 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  
 re all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both  
 re they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line above  
 re 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  
 That Pipes are carried through the bunkers NONE How are they protected yes  
 re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes  
 s 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  
 ompartment to another yes Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

AIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2470 sq ft  
 Is Forced Draft fitted yes No. and Description of Boilers 2 Single Ended Working Pressure 180  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes BELFAST RPT N<sup>o</sup> 9441.  
 IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? \_\_\_\_\_  
 PLANS. Are approved plans forwarded herewith for Shafting \_\_\_\_\_ Main Boilers \_\_\_\_\_ Auxiliary Boilers \_\_\_\_\_ Donkey Boilers \_\_\_\_\_  
 (If not state date of approval) \_\_\_\_\_  
 General Pumping Arrangements \_\_\_\_\_ Oil fuel Burning Piping Arrangements yes

SPARE GEAR. State the articles supplied:— 2 Connecting Rod w/ End bolts out, (top end) ditto for bottom end, 2 Main Bearing bolts one set of coupling bolts, one set of Feed, Bilge Pump valves, a quantity of assorted bolts, nuts, & screw covers

The foregoing is a correct description,

Manufacturer.



003581-003590-0299

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - - -

(1924) July 11-12-21-23 Aug 1-8-12-13-15-16-19-21-23-24 Sept 2-3-5-6-8-13

Total No. of visits 20

Dates of Examination of principal parts—Cylinders ✓ Slides ✓

Covers ✓ Pistons ✓ Rods ✓

Connecting rods ✓ Crank shaft ✓ Thrust shaft ✓

Tunnel shafts ✓ Screw shaft ✓ Propeller ✓

Stern tube ✓ Engine and boiler seatings 12-4-24 Engines holding down bolts 15-8-24

Completion of pumping arrangements 5-9-24 Boilers fixed 15-8-24 Engines tried under steam 13-9-24

Completion of fitting sea connections 12-4-24 Stern tubes 12-4-24 Screw shafts and propellers 16-4-24

Main boiler safety valves adjusted 5-9-24 Thickness of adjusting washers F  $\frac{1}{32}$  A  $\frac{1}{32}$  F  $\frac{1}{32}$  A  $\frac{3}{8}$

Material of Crank shaft ✓ Identification Mark on Do. ✓

Material of Thrust shaft ✓ Identification Mark on Do. ✓

Material of Tunnel shafts ✓ Identification Marks on Do. ✓

Material of Screw shafts ✓ Identification Marks on Do. ✓

Material of Steam Pipes Solid Drawn Copper ✓ Test pressure 400 lbs  $\frac{5}{8}$ " Date of Test 24-8-24

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 carrying and burning oil fuel been complied with *yes* ✓

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.)

These Engines, Boilers have been securely fitted on board. Tried under steam & found satisfactory. The Machinery is eligible in my opinion for the record of  $\frac{1}{2}$  LMC. 9-27 as recommended in Belfast Bull. 870 944. + to have notation of Fitted for oil fuel 9-27 FP above 150°F

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.27. FD. CL. Fitted for oil fuel 9.27. FP above 150°F.

*JWD.*  
21/9/27  
*APR*

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 ... £ : :  
 Special *115/2* ... £ 8 : 15 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, *16th Sept. 1927*  
 When received, *15.10.27*

*W. Gordon Macleod*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 20 SEP 1927**

TUES. 4 OCT 1927

Assigned + LMC 9.27. Fitted for oil fuel 9.27 FP above 150°F.

CERTIFICATE WRITTEN 21.9.27

Date of writing

No. in S. Reg. Book.

Built at

Engines made

Boilers made

Registered

Nom. Horse

Trade for

ENGINES

Dia. of Cyl

Crank shaft

Intermediat

Tube Shafts

Bronze Line

propeller boss

If the liner doe

If two liners

end of the tub

Propeller, dia

Feed Pumps

Bilge Pumps

Feed Pumps { No. How

Ballast Pump

Are two independ

Bilge Pumps; -

In Holds, &c.

Main Water

No. and size

Are the Bilge St

Are all Sea Co

Are they fixed su

Are they each fit

What Pipes pass

What pipes pass

Are all Pipes, O

Is the arrange

compartment to a

MAIN BO

Is Forced Dro

IS A REL

IS A DO

PLANS.

Superheaters

SPARE G

The fo