

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

13 MAR 1928

Date of writing Report 12-3-1928. When handed in at Local Office 19 Port of **PLYMOUTH**

No. in Survey held at **Dartmouth**. Date, First Survey 8-10-1923. Last Survey 4th Feb 1928.
 Reg. Book. on the **Steel Screw Lug "EL TIGIL"** (Number of Visits 16.)

Gross 129.4
 Net Nil.
 Tons

Built at **Dartmouth**. By whom built **Philip & Son, Ltd.** Yard No. 418. When built 1928.

Engines made at **Dartmouth**. By whom made **Philip & Son, Ltd.** Engine No. 234. when made 1928.

Boilers made at **Hebburn-on-Tyne**. By whom made **Palmer's S. B. & Iron Co., Ltd.** Boiler No. 1049. when made 1928.

Registered Horse Power Owners **Sudan Government**. Port belonging to

Nom. Horse Power as per Rule 44. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines **Compound Surface Condensing.**

Dia. of Cylinders 15" & 32" Length of Stroke 24" Revs. per minute 134. No. of Cylinders 2. No. of Cranks 2.

Dia. of Crank shaft journals as per rule 4" as fitted 4" Dia. of Crank pin 4" Crank webs Mid. length breadth 13" Thickness parallel to axis 4 3/4" shrunk Thickness around eye-hole 3 1/8"

Diameter of Thrust shaft under collars as per rule 4" as fitted 4" Diameter of Tunnel shaft as per rule 6 5/8" as fitted 6 5/8" Diameter of Screw shaft as per rule 7 3/8" as fitted 7 1/2" Is the Screw shaft fitted with a continuous liner the whole length of the stern tube No liner. Is the after end of the shaft made watertight in the propeller boss Yes.

If the liner is in more than one length are the joints burned between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive. 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.

If two 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 of it being efficiently lubricated. Grease lubrication. Length of Stern Bush 2' 6" Diameter of Propeller 8' 2"

Pitch of Propeller 10' 0" No. of Blades 4. State whether Moveable Yes. Total Surface 28 square feet.

No. of Feed Pumps fitted to the Main Engines One Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work.

No. of Bilge Pumps fitted to the Main Engines One Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work.

Total number and size of power driven Feed and Bilge Auxiliary Pumps One single feed, 6 1/2" x 4 1/2" x 10" and one duplex bilge, 5 1/4" x 4 3/4" x 5".

No. and size of Pumps connected to the Main Bilge Line One main, 3" x 12" and one duplex as above, also one bilge ejector.

No. and size of Ballast Pumps One duplex 5 1/4" x 4 3/4" x 5". No. and size of Lubricating Oil Pumps, including Spare Pump None.

Are two independent means arranged for circulating water through the Oil Cooler. No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room One 3" and 2" bilge ejectors. and in Holds, &c. Two 3", one Ford, one Aft.

No. and size of Main Water Circulating Pump Bilge Suctions One 4". No. and size of Donkey Pump Direct Suctions

to the Engine Room Bilges One 3". 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 connections with the sea direct on the skin of the ship Yes. Are they 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 Discharge Pipes above or below the deep water line Above.

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 are carried through the bunkers Bilge suction How are they protected Steel plate casing.

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 Screw Shaft Tunnel watertight None. Is it fitted with a watertight door worked from.

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 1600 sq. ft.

Forced Draft fitted No. No. and Description of Boilers One single ended. Working Pressure 150 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes.

IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded? Yes.

PLANS. Are approved plans forwarded herewith for Shafting Yes. Main Boilers Yes. Auxiliary Boilers Yes. Donkey Boilers Yes.

General Pumping Arrangements Oil fuel Burning Piping Arrangements

SPARE GEAR. State the articles supplied:— 2 Top end bolts & nuts. 2 Bottom end bolts & nuts. 2 Main bearing bolts & nuts. 1 Set Coupling bolts & nuts. 1 Set of feed and bilge pump valves. 2 Propeller blades. A quantity of assorted bolts & nuts and of iron of assorted sizes.

The foregoing is a correct description.

J. G. ... Secretary.

Manufacturer.



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Dates of Survey while building

During progress of work in shops - -	1923. Oct. 8.	1926. Oct. 6. 8.	1924. Mar. 29.	July 20.	Aug. 16.
	Sept. 24.	Oct. 18.			
During erection on board vessel - - -	1924. Nov. 2. 8.	Dec. 5. 13. 21.			
	1928. Jan. 4.	Feb. 1. 4.			
Total No. of visits	16.				

Dates of Examination of principal parts -

Cylinders	8-10-23.	6-10-26.	Slides	8-10-26.
Covers	8-10-23.	6-10-26.	Pistons	8-10-26.
Connecting rods	8-10-26.		Rods	8-10-26.
Tunnel shafts	24-9-24.		Crank shaft	6-10-26. 8-10-26.
Stern tube	24-9-24.		Thrust shaft	6-10-26. 8-10-26.
Engine and boiler seatings	24-9-24.		Screw shaft	24-9-24.
Engines holding down bolts			Propeller	24-9-24.
Completion of pumping arrangements	1-2-28.		Boilers fixed	4-1-28.
Engines tried under steam	1-2-28.		Screw shaft and propeller	18-10-24.
Completion of fitting sea connections	18-10-24.		Stern tube	18-10-24.
Main boiler safety valves adjusted	1-2-28.		Thickness of adjusting washers	1/16" P.4 S.
Material of Crank shaft	Steel.		Identification Mark on Do.	LLOYDS No. 2247. W.G.H. 18-5-20.
Material of Thrust shaft			Identification Mark on Do.	
Material of Tunnel shaft	Steel.		Identification Marks on Do.	LLOYDS No. 7699. J.M.R. 6-10-24.
Material of Screw shaft	Steel.		Identification Marks on Do.	LLOYDS No. 7699. J.M.R. 6-10-24.
Material of Steam Pipes	Copper.		Test pressure	300 lb.
Date of Test	4-1-28.		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 carrying and burning oil fuel been complied with	✓
If so, state name of vessel			Is this machinery duplicate of a previous case	

General Remarks (State quality of workmanship, opinions as to class, &c.)

The engines of this vessel were built in 1923 for stock, the cylinders having been tested on the 8th. October of that year. Please see letter from this Office dated 26th. August, 1926 and the Secretary's of the following day in reply.

The materials and workmanship are good, the machinery has been securely fitted on board the vessel in accordance with the Rules, tried under steam with satisfactory results and is, in my opinion, suitable for classification with record of **LCMC. 2.28.**

It is submitted that this vessel is eligible for THE RECORD. + LMC 2.28

J.M. 15/3/28.

Certificate to be sent to this Office.

The amount of Entry Fee ... £ 2 : 0 : When applied for.
 Special ... £ 8 : 12 : 12-3-1928.
 Donkey Boiler Fee ... £ : ✓ : When received.
 Travelling Expenses (if any) £ 3 : 9 : 31-3-1928.

J. W. Reid.
 Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 27 MAR 1928

Committee's Minute

MAR 16 1928

Assigned

+ LMC 2.28



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