

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office  
 Date of writing Report 30 APR 1926 When handed in at Local Office 10 Port of London  
 No. in Survey held at Newbury Date, First Survey Dec. 1<sup>st</sup> 1925 Last Survey 29<sup>th</sup> April 1926  
 Reg. Book. 37714 on the Keel Lr. "Harakara" (Number of Visits 1) Tons Gross 530  
 Built at Saltney By whom built J. Dickson & Co. Ltd. Yard No. 414 When built 1926  
 Engines made at Newbury By whom made Plenty & Son Ltd. Engine No. 2540 when made 1926  
 Boilers made at Stockton By whom made Riley Bros. Ltd. Boiler Nos. 564, 562 when made 1926  
 Registered Horse Power 148 Owners Sydney Ferries, Ltd. Port belonging to Sydney & P.W.  
 Nom. Horse Power as per Rule 148 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Vertical Triple — Propellers Fore & Aft.  
 Dia. of Cylinders 16 1/2, 26 & 43 Length of Stroke 24 Revs. per minute 170 No. of Cylinders Three No. of Cranks Three  
 Dia. of Crank shaft journals as per rule 6.79 Dia. of Crank pin 9 Crank webs as per rule 6.47 Mid. length breadth 17 Thickness parallel to axis 7 1/2  
 Diameter of Thrust shaft under collars as per rule 8.60 Diameter of Tunnel shaft as per rule 8.60 Diameter of Screw shaft as per rule 8.375 Thickness around eye-hole 4  
 fitted with a continuous liner the whole length of the stern tube Yes 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 joints burned 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 appliance fitted at the after end of the shaft to permit of it being efficiently lubricated No Length of Stern Bush 3' - 2" Diameter of Propeller 8 ft.  
 Pitch of Propeller 10 ft. No. of Blades C.S. Four State whether Moveable No Total Surface 27 each square feet.  
 No. of Feed Pumps fitted to the Main Engines One Diameter of ditto 3 1/2" Stroke 12" Can one be overhauled while the other is at work Yes  
 No. of Bilge Pumps fitted to the Main Engines One Diameter of ditto 3 1/2" Stroke 12" Can one be overhauled while the other is at work Yes  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps One 7 1/2" x 5" x 6" — General Service.  
 No. and size of Pumps connected to the Main Bilge Line Two. Main Bilge 3 1/2" x 12" & General Service 7 1/2" x 5" x 6"  
 No. and size of Ballast Pumps Owned by General Service No. and size of Lubricating Oil Pumps, including Spare Pump —  
 Are two independent means arranged for circulating water through the Oil Cooler Yes No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room Two @ 2 1/2" and in Holds, &c. Two @ 2 1/2"  
Two 2 1/2" Vector Suction in E & B room.

No. and size of Main Water Circulating Pump Bilge Suctions One @ 6" No. and size of Donkey Pump Direct Suctions —  
 to the Engine Room Bilges — Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes —  
 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 —  
 Are all connections with the sea direct on the skin of the ship — Are they Valves or Cocks —  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates — Are the Discharge Pipes above or below the deep water line —  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel — Are the Blow Off Cocks fitted with a spigot and brass covering plate —  
 What Pipes are carried through the bunkers — How are they protected —  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times —  
 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 — Is the Screw Shaft Tunnel watertight — Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record —) Total Heating Surface of Boilers — Working Pressure —  
 Is Forced Draft fitted — No. and Description of Boilers —  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? —  
 IS A DONKEY BOILER FITTED? — 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) — Oil fuel Burning Piping Arrangements —  
 General Pumping Arrangements —

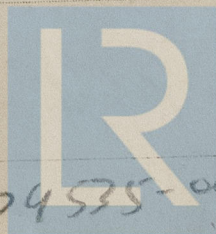
## SPARE GEAR. State the articles supplied:—

One propeller & shaft — 6 coupling bolts — 1 set main Bearing bolts — 1 set Top End bolts —  
1 set Bottom End bolts — 1 set of rings for I.P. & L.P. pistons — 2 Limit Rings for I.P. piston —  
1 set feed pump valves — 1 set bilge pump valves — 1 Air Pump bucket, Rod and valves  
complete — 6 Condenser tubes & 24 ferrules.  
Centrifugal Circulating Pump — 1 Piston Rod — 1 Impeller & shaft — 1 shaft spindle complete.  
Heiss Feed Pump — 1 Steam valve chest complete — 2 Piston Rings — 1 set valve springs.

The foregoing is a correct description  
 FOR AND ON BEHALF OF  
 PLENTY & SON, LIMITED.

Manufacturer.

SECRETARY.



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Lloyd's Register  
Foundation

004535-009543-0214



Dates of Survey while building  
During progress of work in shops -- 1925 Dec. 1<sup>st</sup> 1926 Jan. 8<sup>th</sup> + 29<sup>th</sup> March 1<sup>st</sup> + 12<sup>th</sup> April 29<sup>th</sup>  
During erection on board vessel --  
Total No. of visits 7 (on ship)

Dates of Examination of principal parts - Cylinders 8-1-26, 29-1-26, 1-3-26, 12-3-26 Slides 8-1-26, 12-3-26  
Covers 1-3-26, 1-12-25 Pistons 8-1-26, 29-1-26, 1-3-26, 12-3-26 Rods 8-1-26, 29-1-26, 1-3-26  
Connecting rods 8-1-26, 29-1-26, 1-3-26 Crank shaft 12-3-26 Thrust shaft 12-3-26  
Tunnel shafts 29-3-26 Screw shaft 12-3-26, 29-4-26 Propeller 29-3-26  
Stern tube 1-3-26 Engine and boiler seatings Engines holding down bolts  
Completion of pumping arrangements Boilers fixed Engines tried under steam  
Completion of fitting sea connections Stern tube Screw shaft and propeller  
Main boiler safety valves adjusted Thickness of adjusting washers  
Material of Crank shaft Steel Identification Mark on Do. LLOYDS N° 1166 TH. 8-2-26  
Material of Thrust shafts Steel Identification Mark on Do. LLOYDS N° 1111 SHF. 12-3-26  
Material of Tunnel shafts Steel Identification Marks on Do. LLOYDS N° 1182 1183 1185 1186 1187 1188 1108 7493 LR  
Material of Screw shafts Steel (C-L) Identification Marks on Do. LLOYDS N° 1130 SHF. 12-3-26  
Material of Steam Pipes Test pressure Date of Test  
Is an installation fitted for burning oil fuel 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  
Is this machinery duplicate of a previous case Yes If so, state name of vessel S. Languena N° 2579 and N° 2539.

General Remarks (State quality of workmanship, opinions as to class, &c.)  
\* Tunnel shaft N° 1187 is placed on board as spare and a new length to be made by Darlington Forge is to be fitted at Saltney.

This Machinery has been constructed under Special Survey and in accordance with the Society's Rules.  
The materials & workmanship are good and, in my opinion, the Machinery will be eligible for Classification with the record of + L.M.C. (with date) when it is fitted aboard the vessel.  
The Engine has been forwarded to Saltney for installation.

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 £ 16 : 0 :  
Special 2/5 = ... £ : :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 5 : 15 :  
When applied for, 30 APR 1926  
When received, 12. 6. 26

Richard Palmer  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned See Machinery rpt.