

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 13 AUG 1926

Date of writing Report 10 When handed in at Local Office 20/7/26 Port of Newcastle-on-Tyne  
 No. in Survey held at Reg. Book. 38028 on the steel sc. ANGLO-PERUVIAN Date, First Survey 2 March Last Survey 23 July 1926  
 87910 (Number of Visits) 39  
 Built at Sunderland By whom built Short Brothers Ltd. Yard No. 423 Tons { Gross 5530 Net 3563  
 Engines made at Newcastle By whom made Rank Eastern Marine Eng. Co. Ltd Engine No. 2626 When built 1926  
 Boilers made at Newcastle By whom made Rank Eastern Marine Eng. Co. Ltd Boiler No. 2626 when made 1926  
 Registered Horse Power Owners Nitrate Producers S.S. Co. Ltd (London & Co. Ltd. Mgo) Port belonging to  
 Nom. Horse Power as per Rule 453 ✓ Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted Yes  
 Trade for which Vessel is intended Ocean-going

**ENGINES, &c.**—Description of Engines *Inverted Quadruple Expansion*  
 Dia. of Cylinders *23 1/2" 30 1/2" 47" 68"* Length of Stroke *48"* No. of Cylinders *4* Revs. per minute *64*  
 Crank shaft, dia. of journals as per Rule *13 7/8"* as fitted *13 7/8"* Crank pin dia. *14 1/4"* ✓ Crank webs Mid. length breadth *2 1/4"* Thickness parallel to axis *8 1/2"* ✓  
 Intermediate Shafts, diameter as per Rule *13 08"* as fitted *13 7/8"* Thrust shaft, diameter at collars as per Rule *13 7/8"* as fitted *13 7/8"*  
 Tube Shafts, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule *14 5/8"* as fitted *14 3/8"* ✓ Is the screw shaft fitted with a continuous liner { Yes ✓  
 Bronze Liners, thickness in way of bushes as per Rule *3/4"* as fitted *3/4"* ✓ Thickness between bushes as per Rule *3/4"* as fitted *3/4"* ✓ 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 ✓  
 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 Oil Gland or other appliance fitted at the after end of the tube shaft No ✓  
 Propeller, dia. *18'0"* Pitch *18'0"* No. of Blades *4* Material ✓ whether Moveable no. Total Developed Surface *100* sq. feet  
 Feed Pumps worked from the Main Engines, No. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓  
 Bilge Pumps worked from the Main Engines, No. *2* ✓ Diameter *4 1/2"* Stroke *26"* Can one be overhauled while the other is at work Yes ✓  
 Feed Pumps { No. and size *Two 7" x 9 1/2" x 2 1/2"* ✓ Pumps connected to the { No. and size *Two main Engine Rams & Ballast pumps* ✓  
 { How driven *Steam* ✓ Main Bilge Line { How driven *Steam* ✓  
 Ballast Pumps, No. and size *One 10" x 11" x 10"* ✓ Lubricating Oil Pumps, including Spare Pump, No. and size *None* ✓  
 Are 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 *Three 3" dia. Dry Tank 1-2 3/4"* ✓  
 In Holds, &c. *No. 1 Hold 2-2 3/4"* ✓ *No. 2 Hold 2-3 1/4"* ✓ *Deep Tank 2-3"* ✓ *No. 3 Hold 2-3"* ✓ *No. 4 Hold 2-2 3/4"* ✓  
*Tunnel Well 1-2 1/4"* ✓

**Main Water Circulating Pump Direct Bilge Suctions, No. and size** *One 9"* ✓ **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  
 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 tankers *Forward Bilge Suctions* ✓ How are they protected *wood-cased* ✓  
 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 Yes ✓ worked from

**MAIN BOILERS, &c.**—(Letter for record *S*) Total Heating Surface of Boilers *6216 sq* ✓  
 Is Forced Draft fitted Yes ✓ No. and Description of Boilers *3 S. C. Cyl. Mult. 100* Working Pressure *220 lbs* ✓  
**IS A REPORT ON MAIN BOILERS NOW FORWARDED?** Yes ✓  
**IS A DONKEY BOILER FITTED?** Yes ✓ If so, is a report now forwarded? Yes ✓  
**PLANS.** Are approved plans forwarded herewith for Shafting ✓ Main Boilers Yes ✓ Auxiliary Boilers ✓ Donkey Boilers Yes ✓  
 (If not state date of approval) Superheaters ✓ General Pumping Arrangements ✓ Oil fuel Burning Piping Arrangements ✓

**SPARE GEAR.** State the articles supplied:— *One C.I. Propeller, one screw shaft, 2 Top End Bolts & nuts, 2 Bottom End Bolts & nuts, 2 main Bearing Bolts & nuts, 6 Coupling Bolts & nuts, one set Feed Pump valves, 2 Bilge pump valves, one set aux. feed pump valves, one set ballast pump valves, 10 Brass Condenser ferrules, 12 piston studs, one set each packing for HP & 1st Int. pistons & valves, one set piston & bucket rings for each main feed pump, Impeller spindle for centrifugal pumps, one set piston ring & springs for centrifugal pump & fan engines, set brasses & bolts, eccentric chap, piston valve, packing for rods of fan engine & centrifugal pump engine, one crank shaft for fan engine, set of six Thrust pads, Assorted Bolts, nuts, bars & plates.*

The foregoing is a correct description,  
 THE NORTH EASTERN MARINE ENGINEERING CO. LTD.

*Samuel Allen*  
 MANUFACTURER.  
 SECRETARY.



From Sld.  
 If not, state whether, and when, one will be sent?  
 Is a Report also sent on the Hull of the Ship?  
 NOTE.—The words which do not apply should be deleted.  
 Im 10.24. T.

1926  
 During progress of work in shops - - - Mar. 9. 11. 15. 17. 18. 19. 23. 25. 29. Apr. 7. 9. 13. 20. 21. 26. 28. 29. 30. May 3. 6. 7. 10. 11. 14.  
 17. 21. 26. 27. 31. June 2. 3. 4. 10. July 1. 5. 12. 21. 22. 23.  
 During erection on board vessel - - -  
 Total No. of visits 39.

Dates of Examination of principal parts—Cylinders 21. 4. 26 Slides 21. 5. 26 Covers 21. 4. 26  
 Pistons 3. 5. 26 Piston Rods 3. 5. 26 Connecting rods 3. 5. 26  
 Crank shaft 30. 4. 26 Thrust shaft 21. 4. 26 Intermediate shafts 11. 3. 26 + 20. 4. 26  
 Tube shaft ✓ Screw shaft 6. 5. 26 Propeller 1. 6. 26  
 Stern tube 14. 5. 26 Engine and boiler seatings 5. 7. 26 Engines holding down bolts 21. 7. 26  
 Completion of pumping arrangements 22. 7. 26 Boilers fixed 21. 7. 26 Engines tried under steam 22. 7. 26  
 Main boiler safety valves adjusted 22. 7. 26 Thickness of adjusting washers Port Boiler  $3\frac{1}{2}''$  Super  $3\frac{1}{2}''$  Centre Blk  $3\frac{1}{2}''$  Super  $3\frac{1}{2}''$  Star Blk  $5\frac{3}{8}''$  Super  $3\frac{1}{2}''$   
 Crank shaft material S.M. Ingot Steel Identification Mark 7402N Thrust shaft material S.M. Ingot Steel Identification Mark 7402N  
 Intermediate shafts, material S.M. Ingot Steel Identification Marks 7402N Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft material S.M. Ingot Steel Identification Mark 7402N. 7407N Steam Pipes, material Steel ✓ Test pressure 660 lbs Date of Test 12. 4. 26  
 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 ✓  
 Is this machinery duplicate of a previous case Yes If so, state name of vessel ANGLO-INDIAN.

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines have been constructed under special survey. The materials & workmanship are good. They have been efficiently installed & fastened on board the vessel. The main & auxiliary machinery has been tried out under steam at a mooring trial. The Boiler's safety valves have been adjusted under steam.

The Donkey Boiler, see Ind. Report No. 12664, has been efficiently installed in a Boiler Room on the 'ween decks abaft the main funnel. The stop valve is of the non-return type. The two spring-loaded safety valves have a combined area of 14.14 sq" and were adjusted under steam to 120 lbs - adjusting washers both  $3\frac{1}{8}''$ . They are fitted with easing gear. The Boiler is not fitted for forced draught and the bottom is insulated. Distance between Boiler & bunk 18" Deck + Boiler Bottom 18"

The machinery of this vessel is eligible, in an opinion to have notation in the Society's Register Book - L.M.C. 7. 26 C.L.

It is submitted that this vessel is eligible for THE RECORD. + due 7. 26. C.L. F.D. Jm. Carter 120 lbs.

J.A. 5/8/26. J.P.R.

Wm. H. Jones. R. Lee Amess. Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : - :  
 Special ... £ 92 : 19 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 30. JUL 1926  
 When received, 13. 8. 26

FBI. 6 AUG 1926

Committee's Minute  
 Assigned + L.M.C. 7. 26 C.L. F.D.

