

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office - 9 JUN 1927  
NEWCASTLE-ON-TYNE.

Date of writing Report 1-6-1927 When handed in at Local Office 3-6-1927 Port of **NEWCASTLE-ON-TYNE.**

No. in Survey held at Reg. Book. 233 Sup. on the **S.S. BRITISH INDUSTRY**

Built at **Hebburn** By whom built **Palmers S. & J. Co Ltd** Yard No. **963** When built **1927**

Engines made at **Jarrow** By whom made **Palmers S. & J. Co Ltd** Engine No. **963** when made **1927**

Boilers made at **"** By whom made **"** Boiler No. **963** when made **1927**

Registered Horse Power **"** Owners **British Tanker Co Ltd** Port belonging to **"**

Nom. Horse Power as per Rule **407** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **YES**

Trade for which Vessel is intended **"**

**ENGINES, &c.**—Description of Engines **TRIPLE EXPANSION, INVERTED MARINE TYPE** Revs. per minute **71**

Dia. of Cylinders **23" - 39" - 66"** Length of Stroke **45"** No. of Cylinders **3** No. of Cranks **3**

Crank shaft, dia. of journals as per Rule **12.73"** as fitted **13"** Crank pin dia. **13"** Crank webs Mid. length breadth **2" 2"** Mid. length thickness **8 1/4"** Thickness parallel to axis **8 1/4"** Thickness around eye-hole **6 3/16"**

Intermediate Shafts, diameter as per Rule **12.12"** as fitted **12.5"** Thrust shaft, diameter at collars as per Rule **12.73"** as fitted **13"**

Tube Shafts, diameter as per Rule **"** as fitted **"** Screw Shaft, diameter as per Rule **13.557"** as fitted **14.125"** Is the **screw** shaft fitted with a continuous liner **YES**

Bronze Liners, thickness in way of bushes as per Rule **.713"** as fitted **.75"** Thickness between bushes as per Rule **.535"** as fitted **.11"** 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 **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 Oil Gland or other appliance fitted at the after end of the tube shaft **NO** Length of Bearing in Stern Bush next to and supporting propeller **4' 9"**

Propeller, dia. **17' 3"** Pitch **16' 6"** No. of Blades **4** Material **BRONZE** whether Moveable **YES** Total Developed Surface **90** sq. feet

Feed Pumps worked from the Main Engines, No. **2** Diameter **4 1/4"** Stroke **22 1/2"** Can one be overhauled while the other is at work **YES**

Bilge Pumps worked from the Main Engines, No. **2** Diameter **4 1/4"** Stroke **22 1/2"** Can one be overhauled while the other is at work **YES**

Feed Pumps { No. and size **1 PAIR 9 1/2" x 7" x 21"** How driven **STEAM** Pumps connected to the Main Bilge Line { No. and size **2 MAIN ENG. PUMPS, BALLAST PUMP 9" x 11" x 10"** How driven **STEAM**

Ballast Pumps, No. and size **1 @ 9" x 11" x 10"** Lubricating Oil Pumps, including Spare Pump, No. and size **"**

Are two independent means arranged for circulating water through the Oil Cooler **YES** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **3 @ 2 3/4"** In Holds, &c. **1 Steam duplex 9" x 11" x 10"**

**Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 4"** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **1 @ 4 1/2"** 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 **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 **NONE** How are they protected **"**

What pipes pass through the deep tanks **"** Have they been tested as per Rule **YES**

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 **NONE** Is it fitted with a watertight door **"** worked from **"**

**MAIN BOILERS, &c.**—(Letter for record **S**) Total Heating Surface of Boilers **5772** <sup>258</sup> \$

Is Forced Draft fitted **YES** No. and Description of Boilers **TWO CYLINDRICAL MULTITUBULAR** Working Pressure **200 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 **YES** Main Boilers **YES** Auxiliary Boilers **YES** Donkey Boilers **YES**

(If not state date of approval)

Superheaters **YES** General Pumping Arrangements **YES** Oil fuel Burning Piping Arrangements **YES**

**SPARE GEAR.** State the articles supplied:— One propeller shaft, one pair bottom end bearings, one eccentric sheave and strap, one slide valve spindle, 6 thrust block pads, one air pump rod and nut, 24 condenser tubes, 9 propeller blade studs and nuts, 2 C.I. propeller blades, 2 top and 2 bottom end bolts and nuts, 4 main bearing bolts and nuts, one set of coupling bolts and nuts, 2 feed pump valves, one set of bilge pump valves and seats, one of rings and springs for each piston, and H.P. piston valve, 6 plain boiler tubes, one stay boiler tube, 2 cuts of iron plates, 1 cut of assorted iron bar, 100 bolts and nuts, 2 main feed check valve lids, 1 auxiliary feed check valve lid, 1 safety valve spring for main and donkey boilers, 1 circulating pump impeller and shaft, and various spares for oil fuel units.

The foregoing is a correct description,  
**Palmers Shipbuilding & Iron Co., Ltd.**  
**N. Brown**  
Manager, Engine Works.

Manufacturer.



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Lloyd's Register  
Foundation

W1630-0186

1926  
 July 9. 13. 21. Sept. 1. 22. 24. 27. Oct. 26. Nov. 10. 11. 23. Dec. 2. 9. 14. 15. 16. 29. 1927  
 Jan. 5. 11. 12. 18.  
 Feb. 1. 8. 17. 22. Mar. 1. 2. 3. 9. 10. 13. 14. 16. 18. 22. 23. 29. 30. Apr. 1. 13. 14. 18. 20. 22. 25.  
 27. May 10. 13. 16. 17. 20. 27.

During progress of work in shops --  
 Dates of Survey while building  
 During erection on board vessel --  
 Total No. of visits **53.**

Dates of Examination of principal parts—Cylinders 9/12/26, 23/11/27, 1/8/27 Slides 24/12/26, 18/1/27, 1/4/27 Covers 14/12/26, 18/1/27  
 Pistons 14/12/26, 18/1/27 Piston Rods 23/3/27, 14/3/27 Connecting rods 18/1/27, 10/3/27, 1/4/27  
 Crank shaft 10/11/26 Thrust shaft 1/2/27, 14/4/27 Intermediate shafts 3/3/27, 20/4/27  
 Tube shaft ✓ Screw shaft 9/12/26, 14/12/26, 29/3/27, 30/3/27 Propeller 5/1/27, 18/1/27, 16/3/27  
 Stern tube 24/9/27 Engine and boiler seatings 24/4/27 Engines holding down bolts 16/5/27  
 Completion of pumping arrangements 20/5/27 Boilers fixed 16/5/27 Engines tried under steam 27/5/27  
 Main boiler safety valves adjusted 20/5/27 Thickness of adjusting washers M.B.-(Port) RV  $\frac{3}{8}$ " S.V.  $\frac{13}{32}$ " Starb. PV.  $\frac{13}{32}$ " S.V.  $\frac{13}{32}$ " D.B. F.V.  $\frac{3}{8}$ " A.V.  
 Crank shaft material Steel Identification Mark MB. 6970, 6971, 6972/3 Thrust shaft material Steel Identification Mark 1341 TL 2726  
 Intermediate shafts, material Steel Identification Marks 1340 TL 2/7/26 Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material Steel Identification Mark 1728, 29/2/26 Steam Pipes, material Steel ✓ Test pressure 600 LBS Date of Test 16/5/27  
 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. The machinery of this vessel has been built under Special Survey, the workmanship and materials are good.  
 In my opinion the machinery of this vessel is eligible to have the following records of survey — + L.M.C. 5. 27, T.S. C.L. Fitted for oil fuel 5. 27, F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 5. 27. F.D. CL. Fitted for oil fuel 5. 27. F.P. above 150°F.

J.W.D.  
 10/6/27

Thomas Napier  
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : 0 :  
 Special ... £ 83 : 1 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 8/6/1927  
 When received, 21. 6. 27

Committee's Minute FRI. 10 JUN 1927

Assigned + L.M.C. 5. 27 F.D. CL. Fitted for oil fuel 5. 27 F.P. above 150°F

IN DUPLICATE Certificate to be sent to NEWCASTLE-ON-TYNE

The Surveyors are requested not to write on or below this space for Committee's Minute.