

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office  
NEWCASTLE-ON-TYNE

Date of writing Report 9. 5. 1928 When handed in at Local Office 12-5-1928 Port of **NEWCASTLE-ON-TYNE**

No. in Survey held at **Jarrow** Date, First Survey **30 Dec 1927** Last Survey **3 May 1928**  
 Reg. Book. **9869** on the **S.S. "APURE"** (Number of Visits **35**) Tons { Gross **3163.72**  
 Net **1669.22**  
 Built at **Hebburn** By whom built **Palmers Co. Ltd** Yard No. **982** When built **1928**  
 Engines made at **Jarrow** By whom made **Palmers Co. Ltd.** Engine No. **982** when made **1928**  
 Boilers made at **"** By whom made **"** Boiler No. **982** when made **1928**  
 Registered Horse Power **✓** Owners **Venezuela Gulf Oil Co. Inc.** Port belonging to **Maracaibo**  
 Nom. Horse Power as per Rule **2481** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **YES**  
 Trade for which Vessel is intended **"**

**ENGINES, &c.**—Description of Engines **TWIN SCREW, TRIPLE EXPANSION.** Revs. per minute **128**

Dia. of Cylinders **14½, 24, 39½** Length of Stroke **27** No. of Cylinders **6** No. of Cranks **6**

Crank shaft, dia. of journals as per Rule **7.56** Crank pin dia. **7¾** Crank webs Mid. length breadth **10¾** Thickness parallel to axis **4¾**  
 as fitted **7.8** Mid. length thickness **4¾** shrunk Thickness around eye-hole **¾**

Intermediate Shafts, diameter as per Rule **7.2 Rule** Thrust shaft, diameter at collars as per Rule **7.56**  
 as fitted **"** as fitted **8**

Tube Shafts, diameter as per Rule **8.31** Screw Shaft, diameter as per Rule **8.78** Is the **tube** shaft fitted with a continuous liner **YES**  
 as fitted **"** as fitted **8.78** Is the **screw** shaft fitted with a continuous liner **YES**

Bronze Liners, thickness in way of bushes as per Rule **549** Thickness between bushes as per Rule **412** Is the after end of the liner made watertight in the  
 as fitted **9/8** as fitted **9/8** 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 **No** 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 **35½**

Propeller, dia. **9' 3"** Pitch **9' 7½"** No. of Blades **4** Material **BRONZE** whether Moveable **No** Total Developed Surface **33** sq. feet

Feed Pumps worked from the Main Engines, No. **2** Diameter **3"** Stroke **15"** Can one be overhauled while the other is at work **YES**  
 Bilge Pumps worked from the Main Engines, No. **2** Diameter **3"** Stroke **15"** Can one be overhauled while the other is at work **YES**

Feed Pumps { No. and size **Two @ 7" x 5" x 8"** Pumps connected to the { No. and size **ONE @ 9" x 10" x 10"**  
 How driven **STEAM** Main Bilge Line { How driven **STEAM**

Ballast Pumps, No. and size **ONE @ 9" x 10" 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 **3 @ 2¾"**  
 In Holds, &c. **✓**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **2 @ 5"** Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size **ONE @ 4"** 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 **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 **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 **NONE** Is it fitted with a watertight door **✓** worked from **✓**

**MAIN BOILERS, &c.**—(Letter for record **(5)**) Total Heating Surface of Boilers **4808** <sup>sq. ft.</sup>  
 Is Forced Draft fitted **No** No. and Description of Boilers **Two S.E. Cyl. MULTITUBULAR** Working Pressure **180 Lbs.**  
**IS A REPORT ON MAIN BOILERS NOW FORWARDED?** **YES**  
**IS A DONKEY BOILER FITTED?** **No** If so, is a report now forwarded? **✓**  
**PLANS.** Are approved plans forwarded herewith for Shafting **No** Main Boilers **YES** Auxiliary Boilers **-** Donkey Boilers **-**  
 (If not state date of approval)  
 Superheaters **-** General Pumping Arrangements **YES** Oil fuel Burning Piping Arrangements **YES**

**SPARE GEAR.** State the articles supplied:— **Two propeller shafts, two C.I. propellers, two sets of piston rings, for each cylinder, set of rings for piston valve, 1 piston rod with nut, 1 valve spindle with nuts, 2 sets of metallic packing blocks and springs for piston rods, 2 sets of metallic packing blocks and springs for slide rods, 1 bottom end bearing, bottom end bolts and nuts, 1 top end bearing, 4 top end bolts and nuts, 2 eccentric straps, 1 feed pump plunger, 1 air pump rod, 1 set air pump valves, 2 main bearing bolts and nuts, 1 set of coupling bolts, 40 condenser tubes and ferrules, 1 set of bilge pump valves and seats, 1 set of feed pump valves and seats, 1 main and 1 auxiliary check valve, 1 safety valve spring, 18 piston studs 8 cylinder cover studs and nuts, 8 steam chest studs and nuts, 15 boiler tubes, (one impeller shaft, 1 piston rod with shoe, 2 top and 2 bottom end bearings, and one piston for circulating pump) 1 set of piston rings for each auxiliary pump, a quantity of assorted bolts and nuts, sheet iron, and muntz metal sheets.**

The foregoing is a correct description,

*Palmers Shipbuilding & Iron Co., Ltd.*  
*N. Brown*  
Manager, Engine Works

Manufacturer.



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Dates of Survey while building:
   
 During progress of work in shops - - } 1927. DEC. 30. 1928 JAN. 5. 9. 18. 20. FEB. 1. 13. 14. 16. 27. 29. MAR. 1. 6. 7. 9. 14. 15. 16. 21. 23. 26. 27. 29. 30.
   
 During erection on board vessel - - - } APL. 4. 11. 13. 16. 17. 23. 25. 27. 28. MAY. 1. 3.
   
 Total No. of visits 35.

Dates of Examination of principal parts—Cylinders 6. 14. 27 29/3/28 Slides 16/2/28 Covers 29/3/28
   
 Pistons 16/2/28 Piston Rods 16/2/28 Connecting rods 16/2/28
   
 Crank shaft 21/3/28 18/3/28 Thrust shaft 11/4/28 Intermediate shafts ✓
   
 Tube shaft ✓ Screw shaft 26/3/28 Propeller 13/4/28
   
 Stern tube 11. 4. 28 Engine and boiler seatings 16. 4. 28 Engines holding down bolts 27. 4. 28
   
 Completion of pumping arrangements 27/4/28 Boilers fixed 25/4/28 Engines tried under steam 28/4/28
   
 Main boiler safety valves adjusted 28/4/28 Thickness of adjusting washers P.B. P.V.  $\frac{19}{64}$ " S.V.  $\frac{19}{64}$ " S.B. P.V.  $\frac{17}{64}$ " S.V.  $\frac{21}{64}$ "
   
 Crank shaft material STEEL Identification Mark 982 T.N. 21. 3. 28 Thrust shaft material STEEL Identification Mark 8020 J.P. 28. 2. 28
   
 Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓
   
 Screw shaft, material STEEL Identification Mark 8004 J.P. 9. 2. 28 Steam Pipes, material Copper ✓ Test pressure 360 LBS. Date of Test 16. 4. 28
   
 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 YES ✓ If so, state name of vessel S.S. "CATATUMBO"

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been built under Special Survey, the material and workmanship are good. Eligible in my opinion to have records of +L.M.C. 5. 28, C.L., fitted for oil fuel 5. 28, F.P. above 150°F.*

It is submitted that this vessel is eligible for THE RECORD. +L.M.C. 5. 28 C.L. Fitted for oil fuel 5. 28. F.P. above 150°F.

J.S.A. 18/5/28

NEWCASTLE-ON-TYNE

The amount of Entry Fee ... £ 4 : 0 :
   
 Special ... £ 62 : 0 :
   
 Donkey Boiler Fee ... £ : :
   
 Travelling Expenses (if any) £ : :

When applied for, 12 MAY 1928
   
 When received, 26. 5. 28

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

Committee's Minute

TUES. 22 MAY 1928

CERTIFICATE WRITTEN.

Assigned

+ L.M.C. 5. 28 C.L. Fitted for Oil Fuel 5. 28 F.P. above 150°F

