

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

13 FEB 1928

Date of writing Report 19 _____ When handed in at Local Office 19 _____ Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 28th Sep. '27 Last Survey 4th Feb 1928
 Reg. Book. _____ (Number of Visits 38)
42704 on the T. S. S. "SAN CASTO" Tons Gross 2450
217 Built at Sunderland By whom built J. L. Thompson & Sons Ltd Yard No. 559 When built 1928
 Engines made at Sunderland By whom made MacColl & Polloch Ltd Engine No. 360 when made 1928
 Boilers made at Sunderland By whom made MacColl & Polloch Ltd Boiler No. 360 when made 1928
 Registered Horse Power _____ Owners Anglo-Mexican Petroleum Co Ltd Port belonging to London
 Nom. Horse Power as per Rule 217 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended Carrying Petroleum in Bulk

ENGINES, &c.—Description of Engines Triple Expansion - Twin Screw Revs. per minute 125
 Dia. of Cylinders 13 1/2", 23", 37" Length of Stroke 27" No. of Cylinders 6 No. of Cranks 6
 Crank shaft, dia. of journals as per Rule 7.21" Crank pin dia. 7 3/8" Crank webs Mid. length breadth 10 1/2" Thickness parallel to axis 4 9/16"
 as fitted 7 3/8" Mid. length thickness 4 9/16" shrunk Thickness around eye-hole 3 3/16"
 Intermediate Shafts, diameter as per Rule 6.867" Thrust shaft, diameter at collars as per Rule 7.21"
 as fitted 7" as fitted 7 3/8"
 Tube Shafts, diameter as per Rule _____ Screw Shaft, diameter as per Rule 7.617" Is the screw shaft fitted with a continuous liner Yes
 as fitted _____ as fitted 7 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 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 Yes Length of Bearing in Stern Bush next to and supporting propeller 36 1/2"
 Propeller, dia. 9' 0" Pitch 9.2' No. of Blades 4 Material Bronze whether Moveable No Total Developed Surface 31.2 (each propeller) sq. feet
 Feed Pumps worked from the Main Engines, No. One each, Diameter 2 3/4" Stroke 14" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. One each, Diameter 2 3/4" Stroke 14" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size 2 Weirs 6" x 8 1/2" x 18" Pumps connected to the { No. and size 1 - Weir 9" x 10" x 24"
 How driven Steam Main Bilge Line { How driven Steam
 Ballast Pumps, No. and size 1 - 9" x 10" x 24" Lubricating Oil Pumps, including Spare Pump, No. and size _____
 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 4 @ 3" Dia & 2 @ 2 1/4" Dia.
 In Holds, &c. _____

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 5" Dia Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1 @ 4" Dia 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 pass 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 Machinery Aft Is it fitted with a watertight door _____ worked from _____

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 4209 sq ft
 Forced Draft fitted No No. and Description of Boilers Two Single ended marine type Working Pressure 180 lbs
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? _____
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? _____
 PLANS. Are approved plans forwarded herewith for Shafting _____ Main Boilers Forwarded with S.S. San Camilo F.E. Auxiliary Boilers _____ Donkey Boilers _____
 Superheaters _____ General Pumping Arrangements Yes (with Ship Report) Oil fuel Burning Piping Arrangements Forwarded with S.S. San Camilo F.E.

SPARE GEAR. State the articles supplied:—
Two Top end bolts and nuts, Two bottom end bolts and nuts, Two main bearing bolts and nuts, One set of Coupling bolts,
One set of Feed Pump Valves, One set of Bilge Pump Valves, Two sets of Piston Rings for H.P. M.P. & L.P. Pistons &
3 Springs for L.P. Piston. A quantity of assorted bolts and nuts, and iron of various sizes.
One Propeller Shaft. One pair of Top End Brasses, One pair of Bottom End Brasses, One eccentric Strap complete.
Two C.I. Propellers, One Slide Valve Spindle, One Feed Pump Plunger, One Main & One Aux Check Valve Sid,
Eight long pins and eight bearing cover studs and nuts, Twelve Piston Studs and Nuts, Fifty Boiler Tubes
Twenty Two Condenser Tubes, Two Safety Valve Springs, One Bilge Pump Plunger.
One Propeller Shaft for S.S. "San Camilo."

The foregoing is a correct description,
 PER PRO MACCOLL & POLLOCK LTD.

J. H. Pilling

Manufacturer.



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 Lloyd's Register
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1927. Sep. 28. Oct. 7, 12, 20, 24. Nov. 3, 8, 11, 14, 15, 22, 24, 25, 28, 29. Dec. 1, 5, 6, 8, 12, 20, 21.
 24, 29, 31. 28/1. Jan. 4, 5, 7, 12, 13, 14, 16, 17, 18, 24, 25, 27, Feb. 4.
 Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel ---
 Total No. of visits 38

Dates of Examination of principal parts—Cylinders 24-12-27. Slides 12-12-27. Covers 1-12-27.
 Pistons 11-11-27. Piston Rods 24-10-27. Connecting rods 3-11-27.
 Crank shafts 16-9-27. (Leith) Thrust shafts 15-11-27. Intermediate shafts 15-11-27.
 Tube shaft ✓ Screw shafts Working 6-12-27. Spare 24-11-27. Propellers 20-12-27.
 Stern tubes (P) 5-12-27. (S) 1-12-27. Engine and boiler seatings 29-12-27. Engines holding down bolts 17-1-28.
 Completion of fitting sea connections 8-12-27.
 Completion of pumping arrangements 18-1-28. Boilers fixed 24-1-28. Engines tried under steam 18-1-28.
 Main boiler safety valves adjusted 18-1-28. Thickness of adjusting washers P.P. 3/8". P.S. 13/32". S.P. 11/32". S.S. 11/32".
 Crank shaft material Ingot Steel Identification Marks A.T.T. 16-9-27. Thrust shaft material Ingot Steel Identification Marks (S) 1153.
 Intermediate shafts, material Ingot Steel Identification Marks (S) 1151. Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material Ingot Steel Identification Mark 6-11-27. H.Y.B. Steam Pipes, material S.D. boiler. Test pressure 400 LBS. Date of Test 12-1-28.
 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 T.S.S. "SAN CAMILO" ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The materials and workmanship are good.
 The Machinery has been constructed under Special Survey, and satisfactorily fitted in the vessel, and is eligible in my opinion for classification and the notation
 ✚ L.M.C. 2, 28. Fitted for oil fuel 2, 28. F.P. above 150°F.

It is submitted that
 this vessel is eligible for
 THE RECORD. + LMC 2.28. CL.
 Fitted for oil fuel 2.28. FP above 150°F.

J.W.D.
 14/2/28
 P.J.

The amount of Entry Fee ... £ 4: : : When applied for,
 Special ... £ 54: 5: 17 Feb 1928
 Donkey Boiler Fee ... £ : : : When received,
 Travelling Expenses (if any) £ : : : 25.2.28

A. A. Griffith.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 17 FEB 1928
 Assigned + L.M.C. 2.28 CL
 Fitted for Oil Fuel 2.28 F.P. above 150°F



Certificate to be sent to SUNDERLAND.

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