

# Report of Survey for Repairs, &c., of Engines and Boilers.

(Received at London Office 31 DEC 1930)

Date of writing Report 19/11/30. When handed in at Local Office 10 Port of AUCKLAND, N.Z.

No. in Survey held at Auckland. Date, First Survey 15/9/30. Last Survey 18/11/30. (No. of Visits 14.)

82019. on the Machinery of the Wood, Iron & Steel Motorship "PUKEKO"

Gross 736. Vessel built at Goole. By whom Goole S.B. & Repg. (1927) When 1928 - 3 mo

Net 355. Engines made at Beloit. U.S.A. By whom Fairbanks Morse Co. When 1930.

Nominal Horse Power } Boilers, when made (Main) --- (Donkey) 1930.

No. of Main Boilers --- Owners' Address (if not already recorded in Appendix to Register Book).

No. of Donkey Boilers 1. Managers " " " " Port Napier, N.Z. Voyage Intercolonial.

In Main Boilers --- If Surveyed Afloat or in Dry Dock Both, Calliope. Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

In Donkey Boilers 150 Lbs. Last Report No. Port

Particulars of Examination and Repairs (if any) DOCKING SURVEY (Annual). New Oil Engine Machinery

Periodical Surveys, when held, must be reported in detail and verification in the terms of the Rules. State clearly the

cause of Repairs, if any, and, in detail, the nature and extent of examinations and subsequent Repairs. Repairs on

account of damage (the cause of which must be stated) should be separated from Repairs due to other causes; and

besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the

dates and initials of any letters respecting this case. ---

In damage cases where the Surveyor has not made a special damage report he is required to state whether he

offered his services for this purpose, and why they were declined? ---

Was a damage report made by anyone else? If so, by whom? ---

Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? ---

Do. " Donkey " " " Yes. Cochran Boiler. New. 1930. fitted for Oil Fuel.

If this was not done, state for what reasons? ---

And what parts of the Boilers could not be thus thoroughly examined? ---

Also what special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? ---

Did the Surveyor examine the Safety Valves of the Main Boiler? --- To what pressure were they afterwards adjusted under steam? ---

Did the Surveyor examine the Safety Valves of Donkey Boiler? Yes. To what pressure were they afterwards adjusted under steam? 150 Lbs.

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? --- and of the Donkey Boiler? Yes.

Did the Surveyor examine the drain plugs of the Main Boilers? --- and of the Donkey Boiler? ---

Did the Surveyor examine all the mountings of the Main Boilers? --- and of the Donkey Boiler? Yes.

Has screw shaft now been drawn and examined? Yes. both. Is it fitted with continuous liner? Yes. Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? Yes.

Has shaft now been changed? --- If so, state reasons --- Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? ---

Has the shaft now fitted been previously used? --- Has it a continuous liner? --- Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? ---

State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft? Close working fit. - 3/32" by gauge.

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done? COMPLETE for DOCKING SURVEY, (Annual).

also for NEW OIL ENGINE MACHINERY (Heavy Oil) & NEW DONKEY BOILER. TAIL SHAFTS & ALL SEA CONNECTIONS SEEN.

All the following parts were examined and found or put in order. MAIN ENGINES (2) Type, Fairbanks-

Morse Heavy Oil Engines, No. 758354/756398. Made in U.S.A. Identification Mark - (P.H.B.) Bedplates,

Cylinders, pistons, connecting rods, top & bottom end brasses, pumps, air, fuel & lubricating, gear wheels,

cam shafts, air & fuel valves and nozzles, crank, thrust bearing, intermediate shaft, tail shafts, propellers

stern bushes, all sea connections & fastenings, All Spare Gear (as per Rule) Engines comprise two sets

of 4, Cyl. 2. S.C. 14" Dia. X 17" Stroke, Diesel crude heavy oil, crankcase scavenging each, rated at 265.

B.H.P. at 250 Revs. Makers FAIRBANKS-MORSE Co. Beloit. U.S.A.

BOILER. Type, Cochran Patent Vertical, Makers, Cochran, Annan, Scotland. New. 1930. Boiler No. 11697.

Identification Mark. (J.L.M.) 18793. I/T. 275/150. all the following parts were seen, Boiler

shell, externally & internally, Furnace crown tubes and tube plates, all boiler mountings, manhole door

& mud hole doors, furnace front and nozzle, water gauge mountings and Safety Valves, Boiler tested -

General Observations, Opinion, and Recommendation: --- This vessels Machinery is now in good (P.T.O.)

(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also

any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, B.S. 9, 11, B.S. 9, 11, or L.M.C. 9, 11,

140 lb., F.D., &c.) condition, and has been built and installed under Special Survey as per Rules, as per Certificates

Sighted, for Engines, Air Receivers, Donkey Boiler, that the Record of LMC. 11/30. with distinctive

mark in RED. (Engines & Boiler built under Special Survey) and TAIL SHAFTS SEEN, 11/30. be made in the

Register Book in the case of this vessel, subject to Periodical Surveys for Oil Engine Machinery as

per Rules. Certificates Sighted, Machinery Verified

Survey Fee (per Section 28) £ 11 0 0. Fees applied for

Special Damage or Repair Fee (if any) £ 10 0 0. Received by me, Richard Smith.

Travelling Expenses (if chargeable) £ . . . . . TUE. 12 MAY 31 FRI. 22 MAY 31

Committee's Minute Assigned Referred + LMC. 11.30 + NE. 11.30

5/11/30 11/30 15/30

See & note new E.B. pbs

CERTIFICATE WRITTEN

Lloyd's Register

Foundation

012508-012513-0071



WORK DONE. Existing Steam machinery removed, viz: Main Boiler & Funnel. Main engines completely with thrust shaft & bearings. New heavy oil engines fitted in lieu of and attaching to existing engine bed and intermediate & propeller shafts, bedplates lined up to suit and new fastenings with cast iron chocks fitted, 44X1-1/8". Thrust bearing integral with engines. New Propellers fitted, 72" Dia. X 55" Pth. (Bronze) solid three bladed type, machined and fitted to existing tail shaft. Engines complete with air compressor, (8" X 6", single stage), fuel, lubricating, circulating water & bilge pumps.

FUEL & SETTLING TANKS. Three independent tanks, 2. Fuel, -1. settling tank fitted in engine room complete with filling and air pipes, sounding pipe, overflow pipe with diaphragm, (Gauze) on upper deck, oil gauge indicator fitted on daily service settling tank, Fuel Tanks sizes, 18' X 6' 1/6" X 5' 1/6". 18' X 7' 1/6" X 5' 1/3". of 5/16" M.S. Plate. 6' X 9' X 1' 1/6" X 1' 1/4" M.S. Plate. Tanks as per rule fitted with trays, fuel valves fitted with extension rods worked from upper deck.

Cylinder circulating water inlets. 2 new 3" bronze cocks with strainers fitted to ships side as per Rule. connected to each cooling water pump.

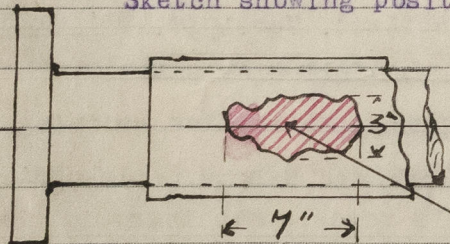
Auxiliary machinery, pumps, electric generator, condenser, pipes and pumping arrangements not altered. Main engine bilge pumps, 2. size, 2-1/4" X 2-5/8" stroke fitted with direct suctions and connected to the bilge range as per Rule.

Air Receivers, 16. of M.S. 16" dia. X 50" long, W.P. 250. lbs. mark-P.H.B. conveniently located in E.R. and fitted to M. Engs. with bronze valves and copper pipes. receivers tested under working conditions and found in order.

Pumps. Fuel, Air, water cooling, lubrication, bilge & ballast examined and tested as per Rule and found in order, SPARE GEAR, As per Rule on Board

DRY DOCK. Tail shafts drawn, New propellers fitted, stern glands and bushes overhauled, all sea connections and discharges overhauled and put in order, 2. new cylr. circulating water cocks fitted, gratings fitted and all existing gratings and fastenings overhauled and put in order. Star Tail shaft repaired in way of liner, defective and non homogenous metal removed for an area of 7" X 3" by 1/4" average thickness and new metal fused and metal made solid where working in the packing gland and found defective, Rps. E.W. process.

Sketch showing position of defective metal. Made solid by fusion.



Note: The liner when examined was found to be continuous in Two sections, No indication that the junctions of the separate pieces had been made by fusion through the whole thickness of the Liner.

Kindly refer to First Entry Report.

DONKEY BOILER. New Donkey Boiler fitted, New funnel fitted, boiler secured in place and all mountings examined and fastened in place, Boiler lagged, and tested under working conditions, Safety Valves set to 150. Lbs. working pressure. Vessels Main propelling machinery, Auxiliary Machinery & Electric Generator tested under working conditions and found in good order.

Signed: - W. Richard Smith.

Surveyor to Lloyds Register.

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