

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

(Received at London Office *19 NOV 1943*)

Date of writing Report Aug. 27, 1943. When handed in at Local Office Aug. 27 1943. Port of Newport News, Va.

Survey held at Newport News, Va. Date, First Survey Feb. 23, Last Survey July 12, 1943.

on the Machinery of the Wood Iron or Steel: "LEONARDO da VINCI" (No. of Visits 60.)

Vessel built at Spezia By whom Ansaldo San Giorgio Year. Month. 1925.
Engines made at Sampierdarena. By whom Ansaldo When 1925.

Boilers, when made (Main) (Donkey)

Owners Ministry of War Transport Owners' Address (if not already recorded in Appendix to Register Book.)

Managers (City Line Ltd.) Port Mombasa, London Voyage

If Surveyed Afloat or in Dry Dock (State name of Dock.) Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

CHARACTER * for Special Survey Date of last Survey and of Periodical Surveys.	Year assigned now expired.	Machinery and Boiler Surveys (including date of N.B., if any)
		<u>Class completed 7 1/2 test for oil fuel</u>

Particulars of Examination and Repairs (if any)

Periodical Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly 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 details being detailed in the body of the report, should be briefly summarised at the end of the report. State also the names and initials of any letters respecting this case.

Where the Surveyor has not made a special damage report he is required to state whether he has offered his services for this purpose, and why they were declined.

Has 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?

Did the Surveyor personally go inside each Donkey Boiler?

Were the Main Boilers examined by hydraulic test pressure?

Were the Donkey Boilers examined by hydraulic test pressure?

Were the Main Boilers examined by pneumatic test pressure?

Were the Donkey Boilers examined by pneumatic test pressure?

Were the Main Boilers examined by the use of 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?

What is the latest date of internal examination of each boiler? Present condition of funnel(s)

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? To what pressure were they afterwards adjusted under steam?

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

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

Did the Surveyor examine all the mountings of the Main Boilers? and of the Donkey Boilers?

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

Has the after bearing 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.

Engine parts, when referred to by numbers, should be counted from forward. Is electric light and/or power fitted?

Did the Surveyor examine the generators, motors, switchgear, cables and fuses?

Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms?

If the survey is not complete, state what arrangements have been made for its completion and what remains to be done. Survey confined to overhaul and repairs to main turbines.

At the port and starboard H.P., M.P. & L.P. turbines were opened up and examined while lying afloat.

Newport News S. & D.D. Co's., Plant at Newport News, Va., the following recommendations were made and repairs carried out by the Newport News S. & D.D. Co.

The H.P. turbines were stripped and removed to machine shop for carrying out the following necessary repairs to place the machinery in good working order.

At H.P. Turbine:-

Blading and shrouding in rotor and casing cleaned and dressed.

Rotor journals trued up in lathe in way of bearings, carbon packing, thrust collar and afterwards balanced. Bearings remetalled and rotor shaft bedded in place, including spares. New carbon

Observations, Opinion, and Recommendation:— The machinery of this vessel when seen,

is 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.M.S. 9,11, & L.M.C. 9,11, or

* L.M.C. 140 lb., F.D., &c.)

is in good, safe working condition and eligible in my opinion to be classed L.M.C. with date

when the survey has been completed.

Signature of Surveyor

Engineer Surveyor to Lloyd's Register of Shipping.

Repair Fee (if any) £ 250.00

expenses (if chargeable) £ 20.00

NEW YORK OCT 20 1943

See Bal Rep. 7904

Lloyd's Register of Shipping

002184-002193-0041

Lloyd's Register Foundation

Insert Character of Ship and Machinery precisely as in the Register Book

Is a Certificate required? If so, to be sent to

packing fitted including one spare set.

Thrust pads remetalled and fitted, including spares.

Flexible coupling overhauled and fitted.

Governor overhauled and made workable..

Starboard H.P. Turbine:-

All blading and shrouding in rotor and casing cleaned and dressed.

Rotor journals trued up in lathe in way of bearings, carbon packing, thrust collar and afterwards balanced.

Bearings remetalled and rotor shaft bedded in place, including spares.

Thrust pads remetalled and fitted, including spares.

Flexible coupling overhauled and fitted.

Governor gear overhauled and made workable.

Port M.P. Turbine:-

1st & 3rd rows of ahead rotor blading renewed, old packing used.

All remaining blading and shrouding in rotor and casing cleaned and dressed.

Rotor journals trued up in lathe in way of bearings, carbon packing, thrust collar and afterwards balanced.

Bearings remetalled and rotor shaft bedded in place, including spares.

Thrust pads remetalled and fitted, including spares.

Flexible coupling overhauled and fitted.

Intermediate steam seal packing in rotor and casing renewed.

Spare nozzle block in turbine casing fitted.

Starboard M.P. Turbine:-

All blading in rotor and casing renewed.

Rotor journals trued up in lathe in way of bearings, carbon packing, thrust collar and afterwards balanced. Bearings remetalled and rotor shaft bedded in place, including spares.

Thrust pads remetalled and fitted including spares.

Flexible coupling overhauled and fitted.

Intermediate steam seal packing in rotor and casing renewed .

Spare nozzle block in turbine casing fitted.

Port L.P. Turbine:-

All ahead and astern reaction rotor blading renewed complete.

All ahead and astern reaction blading in lower half of casing renewed.

All astern impulse blading in rotor and casing dressed up.

Steam seal packing in rotor and casing renewed.

Rotor journals trued up in lathe in way of bearings, carbon packing, thrust collar and afterwards balanced. Bearings remetalled and rotor shaft bedded in place, including spares.

Thrust pads remetalled and fitted including spares.

Flexible coupling renewed.

Governor gear overhauled and made workable.

Starboard L.P. Turbine:-

1st - 21 rows of ahead rotor blading renewed and the remainder dressed up.

1st - 24 rows of ahead blading in lower half of casing renewed and the remainder dressed up.

S/S "LEONARDO da VINCI"

1st - 18 rows of ahead blading in top half of casing renewed, remainder cleaned and dressed up.

5th row of astern reaction blading in rotor renewed and the remainder dressed up.

5th & 6th rows of astern reaction blading top half of casing renewed, the remainder dressed up.

Steam seal packing in rotor and casing renewed.

Rotor journals trued up in lathe in way of bearings, carbon packing, thrust collar and afterwards balanced.

Bearings remetalled and rotor shaft bedded in place including spares.

Thrust pads remetalled and fitted including spares.

Flexible coupling renewed.

Spare nozzle blocks top and bottom half of casing fitted.

Governor gear overhauled and made workable.

Six turbine rotors were balanced in machine and checked.

All blading checked and casings examined prior to closing up of same.

Each turbine was run separately under steam and brought up to the following.

Port and starboard H.P. turbines were run at various speeds for about five (5) hours and run at 4700 R.P.M. for 15 minutes.

Port and starboard M.P. Turbines were run at various speeds for about five (5) hours and run at 3400 R.P.M. for 15 minutes.

Port and starboard L.P. Turbines were run at various speeds for about five (5) hours and run at 2300 R.P.M. for 15 minutes.

On completion of the above, both L.P. casings were lifted and examined, all found in good safe working condition.

John M. ...

