

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

(Received at London Office 10 MAY 1945)

Date of writing Report 13th Apr. 1945 When handed in at Local Office 13th Apr. 1945 Port of Baltimore, Md.  
 No. in Survey held at Baltimore, Maryland Date, First Survey Sept. 8, 1944 Last Survey January 17th 1945  
 Reg. Book 79299 on the Machinery of the Wood-Lincoln Steel M. V. "LAVORO" (No. of Visits 39)

Gross Tonnage 7886 Vessel built at Trieste By whom Cantieri Riuniti Dell' Adriatico When 1938  
 Net Tonnage 4453 Engines made at Turin By whom Soc. An "Fiat" S.G.M. When 1938  
 Nominal Horse Power 1000 NHP Boilers, when made (Main) (Donkey) 1938  
 No. of Main Boilers - Owners A. Leuro Owners' Address -  
 (if not already recorded in Appendix to Register Book.)  
 No. of Donkey Boilers 2 Managers Anglo-Saxon Petroleum Co. Port Naples Voyage -  
 Steam Pressure in Main Boilers - If Surveyed Afloat on in Dry Dock Bethlehem Steel Co.  
 in Donkey Boilers 180 lbs. (State name of Dock.) Key Highway Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

Last Report No. - Port - Contemplated Class., Dkg., Dmge., Rpra.  
 Particulars of Examination and Repairs (if any)

Periodical Surveys, when held, must be reported in detail and seriatim 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? -

" " Donkey " " " Yes

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? -

State latest date of internal examination of each boiler 26 - 12 - 44 P & S

Present condition of funnel Good

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? 180 lbs.

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

and of the Donkey Boilers? Yes

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? Yes

Has the shaft now been drawn and examined? Yes

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? No

Has the shaft now been changed? No If so, state reasons -

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? -

Date of examination of Screw Shaft Oct. 28, 1944 State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft 1/8"

Engine parts, when referred to by numbers, should be counted from forward.

Is electric light and power fitted? Yes

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

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

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done Complete

When the vessel was on the drydock, the fastenings of the propeller, the stern tube and the sea valves were examined and found in order.

RE FOR T.S.:— The tailshaft drawn, examined, placed in lathe, checked for truth, found in order and replaced.

RE FOR D.B.S.:— The two donkey boilers together with all mountings examined internally and externally and all found or now placed in good and safe working condition and tested to 325 lbs. hydrostatic pressure. The boilers and oil fuel burning system afterwards examined under steam and the safety valves adjusted to a working pressure of 180 lbs. per square inch.

RE FOR DAMAGE stated to have been sustained by scuttling and subsequent sinking of vessel at Gibraltar, June 1940:—

Main Engine — The main engine completely stripped to the bedplate for examination including thrust, thrust shaft, intermediate shaft and all bearings. Upon examination, it was found that all main journals, crankpins, (P.T.O.)

## General Observations, Opinion, and Recommendation:—

(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.E.M.S. 9,11, L.M.C. 9,11, or L.M.C. 140 lb., F.D., &c.)

CS 3,34,

The machinery of this vessel, so far as now seen is in good and safe working condition and is eligible in my opinion to be classed with this Society and have a record of Examined 1,45, Classification Contemplated.

Fee (per Section 29) £ -  
 Repair Fee (if any) £ 750.00  
 (per Section 29.)  
 Selling expenses (if chargeable) £ 32.50  
 Late and Sunday Fees 20.00

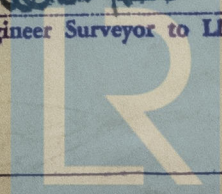
Fees applied for  
Apr. 13, 1945  
 Received by me,  
19

Committee's Minute NEW YORK APR 18 1945 L. W. B.

Signed See First Entry Report attached

T.S. 10.44

Engineer Surveyor to Lloyd's Register of Shipping.



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

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



crossheads, thrustshaft collar and journals, intermediate shaft journals, piston rods, and all fuel pumps, lub oil pump and scavenge pump journals were moderately to badly pitted due to immersion in salt water. The crankshaft removed from vessel and the journals and crankpins machined to good metal to a finished size of: Journals 17.675 inches, Crankpins 17.655 inches, all main and crankpin bearings remetalled and the shaft bedded in in true alignment. The scavenge pump crank, thrust and intermediate shafts, fuel and lubricating oil pump shafts and crossheads all placed in lathe, lightly machined to good metal and all bearings remetalled. All pistons, including scavenge piston, dismantled and all rods machined clean and all packing refitted. The attached lubricating oil pump, attached fresh water circulating pump, attached sea water circulating pump and attached bilge pump, all opened up, examined and placed in order.

**Repairs:-** The attached F. W. circulating pump and the bilge pump connecting rods renewed, the buckets machined and new liners fitted. S. W. circulating pump rod machined, gland rebushed, neck bushing renewed, relief valve springs renewed and all closed up in order. The two lubricating oil coolers removed, a number of defective tubes renewed and the coolers tested to 90 lbs. per sq. inch hydrostatic pressure.

**Auxiliaries:-** The P & S standby lubricating oil pumps, the P & S steam driven air compressors and engines, the general service pump, bilge pump, the fore and aft boiler feed water pumps, the two boiler fuel oil pumps, the diesel driven electric generator engine, the standby circulating water pump and engine, the oil fuel transfer pump, the steam driven electric generator engine, the steam condenser, the domestic fresh water pump, the forced draught fan and two fan engines, the two main cargo pumps and one stripping pump in after cargo pumproom and also in forward cargo pumproom, and the fuel oil transfer pump and fire pump in the forward pumproom, all opened up and placed in order.

**Repairs:-** Standby lub oil pump piston rods machined, new neck and gland bushings fitted, valve rods renewed and steam and oil rings renewed.

Port and starboard air compressor engine crankshaft machined on account of pitting and crank and main bearings remetalled, valve rods renewed and piston rod machined. All steam and air piston rings renewed port and starboard air compressor crankshafts machined and all bearings remetalled. General service pump rods renewed, steam and water end rings renewed. Bilge pump, steam and water end rods machined, new neck and gland bushings fitted. Two boiler feed water pump steam and water end rods machined, new neck and gland bushings and new steam and water end rings fitted.

Two fuel oil pump steam and water end rods machined, new neck and gland bushings and steam and oil rings fitted. The fuel oil heaters opened, cleaned, examined and tested.

Diesel driven electric generator engine crankshaft and thrust shaft machined on account of pitting, crank, thrust and main bearings remetalled, wrist pin bearing and piston renewed and spare cylinder fitted.

Standby circulating water pump engine crankshaft machined on account of pitting, all bearings renewed and piston and valve rod machined.

- Fuel oil transfer pump steam and oil end rods machined, new neck and gland bushings and new rings fitted.

Steam driven generator engine crankshaft machined on account of pitting, wrist pin bearing and piston renewed and spare cylinder fitted.

Steam condenser cleaned, tested and placed in order.

Domestic F. W. pump rings renewed, steam and water ends and valve chests reconditioned.

Fan and fan engine shafts machined on account pitting, all bearings renewed.

All main cargo and stripping pump rings renewed, rods machined, new neck and gland bushings fitted, valve chests reconditioned and relief valves made workable.

Fuel oil and fire pump in fore pumproom, rings renewed, valves and valve chests reconditioned.

**Done for L.M.C.:-** In addition to examination of all the foregoing, the port and starboard upper and lower receivers and all mountings opened up, examined throughout and placed in order, the fire extinguishers and pumping arrangements and the main engine bedplate and holding down bolts examined and all placed in order.

**Electrical:-** Two electric generators, switchboard fuses, electric motors, and all wiring throughout the vessel examined and megger tested and placed in order.

**Electrical damage:-** The damaged electric wiring cut away at the after end of amidship superstructure, junction boxes installed at this point and the electric wiring, power cables and all lighting fixtures renewed amidship superstructure aft, including engine and boiler room spaces, accommodation, storerooms and etc.

Upon completion of all repairs the main and auxiliary machinery was subjected to a dock and sea trial at full power and all was found in order.



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