

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

(Received at London Office)

12 JAN 1944

Date of writing Report 17th Dec. 1943 When handed in at Local Office 17th Dec. 1943 Port of Baltimore, Md.
 No. in Reg. Book 25125 Survey held at Baltimore, Md. Date, First Survey Sept. 17th Last Survey October 25th 1943
 on the Machinery of the ~~Wood Iron~~ Steel M. V. "GRENA" (No. of Visits 16)

Tonnage { Gross 8117 Net 4891 Vessel built at Gothenburg By whom Gotaverken A/B Year. Month. When 1934 12
 Nominal Horse Power 653 NHP Engines made at Gothenburg By whom Gotaverken A/B When 1934
 No. of Main Boilers - Boilers, when made (Main) - (Donkey) 1934
 No. of Donkey Boilers 2 DB Owners A/S J. Ludwig Mowinckels Rederi Owners' Address -
 Steam Pressure in Main Boilers - Managers - Port Bergen Voyage -
 in Donkey Boilers 150 lbs. ~~Surveyed~~ Surveyed ~~Afloat~~ in Dry Dock Maryland Drydock Co. (State name of Dock.)

Last Report No. - Port -

Particulars of Examination and Repairs (if any) DKG., L.M.C. & T.S.

(Periodical Surveys, when held, must be reported in detail and serially 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 P & S Oct. 4th, 1943 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? 150 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 screw 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 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? -

State date of examination of Screw Shaft 1 - 10 - 43 State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft Close

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

If so, 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

Whilst the vessel was on the drydock the fastenings of the propeller, the stern tube and the sea valves were examined and found in order.
 Done for damage stated to have been sustained when the vessel grounded on Nov. 13th and 14th, 1942 when leaving Beirut harbour with cargo of petroleum in bulk:
 The tailshaft drawn and examined, the liner in way of stern tube bearings machined, the stern tube bearings rewooded, the fractured stern gland renewed and all closed up in order.

Done for D.B.S.:— The two donkey boilers together with all mountings opened up, cleaned and examined internally and externally, minor repairs made to mountings and all placed in good and safe working condition. The boilers afterwards examined under steam, the safety valves adjusted to a working pressure of 150 lbs. per square inch and the oil burning arrangements examined and found in order.

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

The machinery of this vessel so far as now seen is in good and efficient condition and eligible in my opinion to be continued as now classed and have a fresh record of T.S. (CL) Seen 10,43 and a record of * L.M.C. 10,43

Survey Fee (per Section 29) L.M.C. £ \$195.00
 Special Damage or Repairs Fee (if any) D.B.S. £ 30.00
T.S. £ 20.00
 Travelling expenses (if chargeable) £ 20.75
 Late Fee £ 10.00

Fees applied for 17th Dec 1943
 Received by me, 19

Committee's Minute NEW YORK DEC 22 1943
 Assigned + L.M.C. - 10, 43 D.B.S. 10, 43
T.S. 10, 43.

CHARACTER * for Special Survey Date of last Survey and of Periodical Surveys.	Years assigned now expired.	Machinery and Boiler Surveys (including date of N.B., if any)
* 100 A1 7,42		* LMC 8,39
ss Got. No. 1-39		* LMC (M) 10,41
		DBS 12,41
		TS CL 3,41
Carrying Petroleum in bulk		

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

Insert Character of Ship and Machinery precisely as in the Register Book. Is a Certificate required? If so, to be sent to

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Done for L.M.C.:- All main engine cylinders, cylinder heads, valves, valve gear, pistons, rods, guides, guide shoes, connecting rods, top and bottom end pins and brasses, main bearings and journals, columns, sole plates and holding down bolts, attached pumps, thrust shaft and thrust, intermediate shaft and bearings opened up, examined throughout and all found or now placed in good and efficient condition. The Port and Starboard air starting vessels with all mounting, examined internally and externally and placed in order. The sea valves and cocks, the condenser, fuel oil pump and heaters, fan and fan engine, condenser circulating pump, three feed pumps, fuel oil transfer pump, bilge sanitary and general service pumps, lubricating oil and main circulating pumps, coolers, auxiliary air compressor and engine, the motor and steam generator engines completely opened up, examined throughout and all placed in order.

The electric generators, motors, switchboards and all wiring throughout the vessel examined, megger tested and placed in order. The fire extinguishing appliances examined and found good and all steam pipes examined and tested.

Done for repairs:- Nos. 1, 3, 4, 5, 7 and 8 cylinder liners removed for examination and Nos. 1, 3, 4, 7 and 8 condemned on account of excessive wear and new liners fitted. Nos. 3 and 5 cylinder heads renewed on account of fractures. No. 8 cylinder head examined and tested and found satisfactory. Marks (Liners) Lloyds 831 - 2 - 3 11-42 C.R.M. and A.C.; (Cylinder heads) Lloyds W.T. 50 lbs. 18 - 12- 42. Fuel oil and feed pump steam and liquid ends rebored, new pistons, rods and neck bushings fitted. The electric generator steam engine H. P. piston rod renewed. L. P. piston machined in way of ring grooves, new rings fitted and the crankshaft lifted, machined in way of all journals and crankpins and all main and crankpin bearings remetalled. The main circulating pump impeller shafts removed, built up where worn in way of packing glands and machined true. All grounds in electrical system removed and all electrical equipment tested out and found satisfactory.

All main and auxiliary machinery tested out under working condition and found satisfactory.

S.R. List:- L.M.C. partly held. Supply spare main engine cylinder cover and liner first opportunity. Examine Nos. 3, 5 and 8 cylinder covers by 10,43 (6 mos. limit)- D.B.S. 12,42 when valves adjusted.

Done:- The L.M.C. now completed. All spare gear now in order. Nos. 3, 5 and 8 cylinder covers examined. Nos. 3 and 5 renewed and No. 8 found satisfactory. The D.B.S now held in its entirety.

REPAIRS

Notes
Jan
 20.1.44
 Without Special Certificate
 No Conclusions there as no steam
 pipes are 3" bore used for circulation
 Laminar at Sea but the Struts
 are Compromised. *Noted*