

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

(Received at London Office

- 3 FEB 1942

 Writing Report 31-1-1942 When handed in at Local Office 31-1-1942 Port of Manchester

 Survey held at Manchester Date, First Survey 20-1-42 Last Survey 28-1-1942

 on the Machinery of the Wood, Iron or Steel S.S. "EMPIRE SPRING" (No. of Visits TWO)

 Gross 6946 Vessel built at Port Glasgow By whom Lithgow Ltd. Year. Month.

 Net 4147 Engines made at Greenock By whom J. G. Baird & Co. When 1941-6

 ver 490 Boilers, when made (Main) (Donkey) 1941

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

 Key Boilers 2 Managers Donaldson Bros & Black Ltd. Port Greenock Voyage

 Boilers ✓ Surveyed Afloat or in Dry Dock Trafford Wharf Manchester

 ey Boilers 150 lbs (State name of Dock.)

 Report No. Port

 Particulars of Examination and Repairs (if any) Machinery Repair

Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and being detailed in the body of the report, should be briefly summarised at the end of the report. State also the initials of any letters respecting this case.

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

A damage report made by anyone else? If so, by whom?

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

" Donkey " " "

not done, state for what reasons?

Parts of the Boilers could not be thus thoroughly examined?

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?

 Date of internal examination of each boiler Present condition of funnel(s) Good.

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

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

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

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

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

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?

Shaft now been changed? If so, state reasons

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?

Examination of Screw Shaft State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft

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

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

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

 If not complete, state what arrangements have been made for its completion and what remains to be done COMPLETE.

At the request of the Owner's representative the worm and worm wheel of the engine were examined on account of excessive and rapid wear of the teeth of the worm wheel.

 Teeth were found to be worn $5/32$ " on one side and $1/16$ " on the other their surfaces together with those of the worm were scoured.

Particles of bronze completely choked the suction of the mechanically actuated lubricating oil pump and partially filled the sump.

Done:-

True and alignment of the worm shaft was checked and found in order.

All burrs were removed from the teeth of the worm and wheel (OVER)

Observations, Opinion, and Recommendation:- The machinery of this vessel,

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

as now run, is, in my opinion, in an efficient condition

eligible to remain as now classed in the Register Book

but fresh record of survey subject to the steering engine worm

being further examined before the end of April, 1942.

(per Section 29) £ : : Fees applied for

"REPAIR CASE" £ 2.2.0 31-1-1942

(per Section 29.) £ : : Received by me,

expenses (if chargeable) £ : : 19

Committee's Minute FRI. 13 FEB 1942

As now

Subject

Engineer Surveyor to Lloyd's Register of Shipping.

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and the mechanically operated lubricating oil pump and sump thoroughly cleaned.

The steering engine was then examined under running conditions and found satisfactory; the lubrication of the worm and worm wheel being efficient.

It is considered that the worm wheel remains efficient but it is recommended that it be further examined before the end of April, 1942.

[Signature]

Note

The material of the worm wheel, as indicated by filing and hammer testing, appeared to be of good quality and it is considered that the rate of wear is such as would occur if the lubricating oil system was inefficient or not working for a period of time.

No information, however, could be obtained regarding this matter of lubrication.

[Signature]

The bronze worm wheel of steering engine worm has been examined & found efficient for the present but on account of excessive rapid wear it is recommended the steering gear wheel room be specially examined before end of 4.42

It is submitted that this report is submitted to main as CLASSIC.

Suggest as recommended

Then
12.2.42



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