

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

(Received at London Office)

8 MAR 1939

Date of writing Report 7-3-1939 When handed in at Local Office 8 MAR 1939 Port of LONDON.

No. in Survey held at 0686 on the Machinery of the Wood, Iron or Steel T.S.C.S. "ORFORD" Date, First Survey 14-2-39 Last Survey 23-2-1939 (No. of Visits 4)

Gross 20043 Net 11982 Vessel built at Barrow By whom Vickers, Ltd When 1928-3

Nominal 3825 Horse Power 608 Engines made at Barrow By whom Vickers, Ltd When 1928

Boilers, when made (Main) 1928 Owners Orient Steam Nav. Co. Ltd (Donkey) ✓

Managers Owners' Address (if not already recorded in Appendix to Register Book.) Port Barrow Voyage Australia

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

CHARACTER. Date of last Survey and of Periodical Surveys. Years assigned for survey. Machinery and Boiler Surveys (including date of N.B., if any).

Fitted for oil fuel 3.28. F.P. above 150°F.

First Report No. Port

Particulars of Examination and Repairs (if any) Comp B.S. part N.S.

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

In 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? Ford section. yes.

" " Donkey " " " ✓

If not done, state for what reasons? Please see London Report No 106541, for after section of boilers.

What parts of the Boilers could not be thus thoroughly examined? ✓

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? ✓

Latest date of internal examination of each boiler Ford section 17-2-39.

Surveyor examine the Safety Valves of the Main Boiler? Ford section yes To what pressure were they afterwards adjusted under steam? 215 lbs.

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? Ford section yes, 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? Ford section yes, and of the Donkey Boilers? ✓

Was shaft now been drawn and examined? no 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? no

Has shaft now been changed? ✓ If so, state reasons ✓

Has 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? P. 80/1000"

Date of examination of Screw Shaft ✓ State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft 5105/1000"

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

Is electric light and/or power fitted? yes

Did 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 survey is not complete, state what arrangements have been made for its completion and what remains to be done Complete.

Work done: Vessel placed in drydock, outside fastenings of sea cocks & valves, rollers, after end of stern bushes examined.

S: The forward section of boilers examined throughout with their valves, doors & mountings & found in order. Boilers examined under steam and their safety valves adjusted as above.

S: Starboard circulating pump and the port & starboard air pumps examined.

Starboard HP turbines opened up, and rotors, casings & blades examined.

Examination of the bottom casings of both turbines, cracks were found.

HP casing: Cracks on port & starboard side of fore end of casing extending from forward flange to the fitted bolt holes. Cracks extend through the

at Observations, Opinion, and Recommendation:— (Continued)

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.)

Machinery of this vessel as now seen is in good and safe working condition and is eligible in my opinion to remain as classed with

a record of B.S. 11, 38, subject to the starboard H.P. turbine lower casing

again examined at forward end before the end of February, 1940.

Fees applied for

Received by me,

J. M. Nicholas.

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation

W347-0095 (112)

TUE. 28 MAR 1939

As now subject

BS. 1138

T. S. S. "ORFORD"

Starboard H casing continued:-

bolt holes & traces found on other side of holes. (Please see attached sketch). Holes were drilled at the ends of the cracks with a view to stop cracks extending

Port H.P. turbine, lower casing. One crack was found extending on starboard side from the forward flange to the fitted bolt hole. This crack can be seen in the bottom of bolt hole but does not appear to extend to the hole on the top side of flange. On the port side two small cracks were found to be running from the forward flange to the fitted bolt hole. These cracks only appear on the bottom of forward flange and do not appear to extend through the flange. Please see attached sketch.

These casings were very carefully examined and these cracks in their present condition, do not in my opinion, affect the efficiency of the casings.

The Owners have given the Chief Engineer instructions to take care in the warming up of the turbines and also in working up the turbines to full speed after a prolonged stop in port etc. The Chief Engineer has also been instructed to examine these cracks at every opportunity and to report any sign of them extending.

It is recommended that the cracks in the Starboard casing should be again examined before the end of February 1940.

J. Micholas.