

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

Date of writing Report Jan. 4th. 1940 When handed in at Local Office Jan. 4th. 1941 Port of Halifax, Nova Scotia, No. in Survey held at Halifax, Nova Scotia, Date, First Survey Oct. 8th. 40 Last Survey Jan. 3rd. 1941 (No. of Visits 27) 37944 on the Machinery of the ~~Wood, Iron or Steel~~ single screw steamship "EMPIRE ENGINEER"

Gross 5358 Net 3230 Vessel built at Montreal, By whom Canadian Vickers Ltd. When 1921 4 Engines made at Montreal By whom Canadian Vickers Ltd. When 1921 Boilers, when made (Main) 1921 (Donkey) - Owners Ministry of Shipping. Owners' Address London. (if not already recorded in Appendix to Register Book.) Managers Weidner, Hopkins & Co. Ltd. Port London, W. Voyage United Kingdom. If Surveyed Afloat or in Dry Dock Afloat. (State name of Dock.) Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

Particulars of Examination and Repairs (if any) Repairs (Defects) Damage (Mach.) +100A1 Examined 8-40 Hpl. (Reclassification contemplated.)

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. 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. as a damage report made by anyone else? If so, by whom? the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? Donkey " " " " this was not done, state for what reasons? and what parts of the Boilers could not be thus thoroughly examined? to 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? the latest date of internal examination of each boiler. Present condition of funnel(s) the Surveyor examine the Safety Valves of the Main Boiler? To what pressure were they afterwards adjusted under steam? the Surveyor examine the Safety Valves of Donkey Boiler? To what pressure were they afterwards adjusted under steam? the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? and of the Donkey Boilers? the Surveyor examine the drain plugs of the Main Boilers? and of the Donkey Boilers? the Surveyor examine all the mountings of the Main Boilers? and of the Donkey Boilers? 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? shaft now been changed? If so, state reasons 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? the 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 Is electric light and/or power fitted Yes. Engine 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? the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? the Survey is not complete, state what arrangements have been made for its completion and what remains to be done Complete.

Examined for damage stated to have been sustained on September 27th., 1940, and subsequently, while on a voyage from Hartlepool to Baltimore via Grangemouth and Methil, in ballast.

FOUND:- Crankshaft, (Main Engine,) fractured abaft After web of L.P. crank section, and forward journal bent. Connecting rods and all bearings disturbed. H.P., I.P., and L.P. top and bottom end bearings damaged. All main bearings damaged. (One casting broken.) Main shafting out of line from Forward end to tail shaft coupling. All eccentric straps except L.P. Astern strap, badly worn. RECOMMENDATIONS:- Removal of section, crankpin and journals, boring of webs and fitting of new crankpin and journal at After end. Remetalling of same, and re-boring to suit respective pins and journals. Remetalling of same to suit pins and journals. Lining of shaft throughout and adjustment of thrust shoes. Remetalling of all except Astern strap of L.P. engine.

General Observations, Opinion, and Recommendation:- The machinery of this vessel, so far as seen, (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. 2, 11, B.&H.S. 2, 11, & L.M.C. 2, 11, or L.M.C. 140 lb., F.D., &c.) is in safe working condition, and eligible, in my opinion, to remain classed as contemplated, without fresh record of survey.

Survey Fee (per Section 29) £ : : Fees applied for Jan. 3rd. 40 Total Damage or Repair Fee (if any) \$180.00 Received by me, Travelling expenses (if chargeable) \$015.55 Committee's Minute Late Fee \$010.00 Assigned No action Lloyd's Register W 387-0225(1/2)

S.S. "EMPIRE ENGINEER".

FOUND:-

I.P. Gland studs and gland proper broken.
Cylinder clearances at fault.
H.P. crankshaft section pin and journals loose in web.
I.P. crankshaft section apparently disturbed at webs. (Possibly due to excessive racing.).

RECOMMENDATIONS:-

Renewal of studs, and fitting of gland supplied by ship.
Checking and adjusting of same.
Renewal of pin and journals, after re-boring of webs.
Removal of shaft section for further examination and testing.
(Found in order.).

Auxiliaries:-

Port Weir's Feed Pump:- Unsatisfactory for feed purposes. (Bucket and piston slack; bucket rod badly worn.).

General overhaul; fitting of new rings both ends, new bucket rod and steam cylinder cover.

Starboard Weir's Feed Pump:- Shuttle valve and chest worn beyond repair, water gland studs stripped, and cover broken.

Renewal of valve and chest, studs, and water gland, and repair of cover.

Filter Tank:- Leaking badly.

Repair of same.

Ballast Pump:- Overboard discharge valve defective.

Repairing of same.

General Service Pump:- Deck delivery valve defective.

Repair of same.

Air Pump:- Overflow pipe at fault.

Renewal of pipe with alteration of shape.

Ash winch:- Worn badly, and in need of overhaul.

Renewal of pipe.

Ash ejector:- Discharge pipe worn badly.

Renewal of same.

Evaporator:- Several pipes damaged and plant unsatisfactory generally.

General overhaul of evaporator and renewal of pipes.

Dynamo Engine Main bearings, top and bottom ends badly worn, oil pump defective, and one crank-case door broken.

Overhaul of engine, and oil pump, and renewal of door.

Fan engine Piston valve and chest badly worn, and piston rings defective.

Boring of chest, renewal of valve and piston rings.

Circulating engine Piston valve and chest badly worn.

Boring of chest and renewal of valve.

Feed Heater:- Cover leaking badly.

New rings to supply and fit.

Telemotor Gear:- Stuffing box and ram on Port side of transmitter defective.

Retapping of stuffing box, and adjusting of ram and gland.

The above recommendations were carried out satisfactorily, and the Main and Auxiliary engines run for a four-hours Dock-trial, as well as for three-hours sea trial, and all found satisfactory.

D. W. Redbank

Surveyor to Lloyd's Register of Shipping.

RETAIN

Main Crank shaft partly renewed.
(The aft journal was broken & the
H.P. crank pin & journals loose)
Shafting lined up & pumps etc
repaired.

Reclassification Survey
not complete.

Submitted in action.

Admiral Newport - Mon
Surveyors.

GA
3/3/41



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