

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

(Received at London Office)

MAY - 9 1940

State of writing Report: 19 When handed in at Local Office 1/5 1940 Port of Antwerp
 in Survey held at Antwerp Date, First Survey 24/3/40 Last Survey 12-4-1940
 Book 657 on the Machinery of the Wood, Iron or Steel SC HAR ZION. (No. of Visits 11)

Age Gross 2508 Vessel built at Copenhagen By whom Akt Burmeister & Wain Year. Month.
 Net 1539 Engines made at do By whom do When 1907-6
 Principal Power 281 Boilers, when made (Main) 1907 (Donkey) ✓ When 1907-
 of Main Boilers 2 Owners Palestine Maritime Lloyd, Ltd. Owners' Address ✓
 of Donkey Boilers ✓ Managers ✓ (if not already recorded in Appendix to Register Book.)
 Main Boilers 180 lbs. in Pressure ✓ Port Famagusta Voyage ✓
 Donkey Boilers ✓ Surveyed Afloat or in Dry Dock Mercantile Long Co's Particulars of Classification (which must be inserted
 (State name of Dock.) Dry Dock. & Nos 403 & 218 berths. precisely as in Register Book & Supplements).

Report No. Port Damage & L.M.C.
 Particulars of Examination and Repairs (if any)

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

Where 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. Yes. Not Required.

Has a damage report been made by anyone else? If so, by whom? Yes. Mr Royal, Salvage Assoc.

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

Donkey " " " "

What was not done, state for what reasons? ✓

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 29.4.40. Present condition of funnel(s) Good.

Has the Surveyor examine the Safety Valves of the Main Boiler? Yes To what pressure were they afterwards adjusted under steam? 185 lbs per sq. in.

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

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

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

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

Has the screw 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 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? ✓

State 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 1/16".

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

Has 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 (as per report).

Is the Survey complete, state what arrangements have been made for its completion and what remains to be done Complete.

Work done on account of damage stated to have been caused by heavy weather dates Feb 18th - 22nd 1940 whilst on a voyage from Tripoli, Syria to U.K. via Haifa and Tel Aviv. Vessel placed in dry dock. Propeller and outside fastenings examined.

Crank shaft, Thrust shaft and intermediate shafting opened up and examined. Holding down bolts tested. Steam pipes tested by hydraulic pressure.

Steering engine opened up and examined.

Repairs:- Nos 2 & 6 Main bearings top halves found broken and scored, now remounted.

No 4 Main bearing bottom half removed for examination, metal found scored, now pressed up and refitted. H/c crank pin bearing, metal found broken and slack.

Top and bottom halves now remounted. Continued:-

General Observations, Opinion, and Recommendation:- The Machinery of this Vessel is in

safe working condition and is eligible in my opinion to remain as classed and to have fresh record of Survey + LMC 4.40 Subject to the electrical

installation in passenger cabins not being used until repaired and to the Main Condenser Bangos piece being renewed before the end of December 1940.

Survey Fee (per Section 29) LMC £3500: Fees applied for 1/5 1940

Special Damage or Repair Fee (if any) (per Section 29.) £1050 Received by me, 19

Travelling expenses (if chargeable) £: TUE 28 MAY 1940

Committee's Minute + LMC 4.40 subject

Assigned

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

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



W1004-0115 13

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Steering Engine:- After piston rod badly worn, now renewed.
 Forward piston rod scored, now skimmed up. Forward piston valve chamber bored out and new valve fitted. One crosshead found broken (cast iron) now renewed. Four piston rings renewed.
 A number of broken holding down bolts (Main Engine) now renewed and the remainder hardened up as required.
 One length of Main steam pipe fractured, now renewed and tested.

Now done for DMC:-

Vessel placed in dry dock. Propeller and outside fastenings examined. Sea connections opened up and examined.
 All Main Engine cylinders, pistons, slide valves and casings, crank, thrust and intermediate shafting examined.
 The Air, Bilge, feed, circulating, ballast, transfer, General Service and oil fuel pressure pumps opened up and examined and the pumping arrangements examined. Dynamo engine opened up and examined. Steam pipes and electrical installation tested as per rule requirements. Condenser examined and tested.
 Main Boilers and their mountings examined internally, externally, under hydraulic pressure (after repairs) and under steam and their Safety Valves adjusted under steam.
 The Oil Burning Installation was examined under working conditions and found to be satisfactory.

Wear and tear Repairs:-

HP Piston rings renewed. HP Piston rod skimmed up and new Metallic packing fitted. HP Piston Valve bobbin repaired with "Johns Bronze". All Air Pump Kinghorn Valves overhauled and worn sets renewed. M.E. Feed pump rammer skimmed up and new neck and gland bushes fitted, relief valves overhauled and made workable.
 One M.E. Bilge pump suction valve seat renewed. About 100 Main Condenser tubes renewed. Division plate on forward Condenser door renewed. Condenser banjo piece found cracked in way of circulating water inlet branch and now repaired with a cement box.
 The circulating pipe line from the Ballast Pump to the Condenser repaired and part renewed.
 After Weir Feed pump:- Water end liner and bucket rings renewed, bucket rod skimmed up and new neck & gland bushes fitted.
 Steam piston ring renewed.
 Forward Weir Feed pump:- Water end liner and bucket rings renewed. Piston ring renewed, bucket rod skimmed up and new neck and gland rings fitted. Main Circulating pump:- Spare cylinder block fitted. Ballast Pump:- Water end completely renewed. Steam pistons renewed. Piston Valve chests bored out and new piston valves fitted.
 One valve spindle renewed. Valve gear overhauled and crosshead pins renewed.

Continued:

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Several lengths of pipe in the ballast and oil fuel line found defective and now renewed. Dynamo Governor overhauled and made workable.

Boiler Mountings:- Port Aux Stop Valve lids renewed. Port Aux feed valve lid and spindle renewed. Safety Valve casing gear made workable.

Port Boiler:- 28 broken cc stays renewed. a number of stay and plain tubes renewed. In all furnaces the opening of the furnace weld had been repaired by welding which owing to its thickness had proved unsatisfactory. This welding was dressed off and the furnaces in way cut right through and rewelded.

Starboard Boiler:- 3 broken cc stays renewed. a number of stay and plain tubes renewed. The furnaces in this boiler which had also been repaired by welding of excessive thickness were dealt with in the same way as the Port Boiler.

Other minor repairs were carried out and the boilers were afterwards tested by hydraulic pressure and found satisfactory. The electrical installation was tested throughout and placed in order with the exception of that in the passenger cabins, which the Owners representative states is not to be used meantime. These circuits have been disconnected and should not be used until repaired.

After the repairs were completed all bilge and ballast lines were tried and found to be clear.

H.M.