

REPORT OF SURVEY FOR REPAIRS, &c., OF ENGINES AND BOILERS

(Received at London Office)

Date of writing Report **20th December 48** When handed in at Local Office **21st December 48** Port of **BRISTOL**
 Date of Survey held at **Avonmouth** Date, First Survey **6th October 48** Last Survey **18th Dec. 48**
 Book. **451** on the Machinery of the **ESSE MANCHESTER** (No. of Visits **34**)
 Gross **10712** Vessel built at **Chester Pa** By whom **Sun S.B. and Drydock Co.** When **1944**
 Net **6301** Engines made at **Lynn Mass** By whom **General Electric Co. Ltd.** When **1944**
 Nominal **1361** Boilers when made (Main) **1944** (Donkey)
 se Power of Main Boilers **2** Owners **Anglo-American Oil Co., Ltd.** Owners' Address **-**
 of Donkey Boilers **500** Managers **Esso Transportation Co. Ltd.** Port **London** Voyage **-**
 Main Boilers **500** If Surveyed Afloat or in Dry Dock **Both**
 Donkey Boilers **-** (State name of Dock.) **Avonmouth**
 Report No. **-** Port **-**

Particulars of Examination and Repairs (if any) LMC and Classification

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.

Where the Surveyor has made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined.
 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? **yes**

What 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?

latest date of internal examination of each boiler **Stbd boiler 8-10-48 Port 10-11-48**

Did the Surveyor examine the Safety Valves of the Main Boilers? **yes** To what pressure were they afterwards adjusted under steam? **500 lbs/sq.in**

Did the Surveyor examine the Safety Valves of the Donkey Boilers? **yes** To what pressure were they afterwards adjusted under steam? **Spt. 464 lbs/sq.in**

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? **yes** and of the Donkey Boilers? **-**

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? **yes** and of the Donkey Boilers? **-**

Has the screw shaft now been drawn and examined? **no** Has it a continuous liner? **yes** Is an approved oil retaining appliance fitted at the after end? **no**

Has the shaft now fitted been previously used? **-** Has it a continuous liner? **-**

Is an approved oil retaining appliance fitted at the after end? **-** State date of examination of Screw Shaft **7/32" at outer**

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**

Done. Vessel placed in drydock. Propeller and all outside fastenings examined. Propeller

Red off and cone end of tail shaft examined.

All sea cocks and valves, suction and discharge, opened out and examined. All ship side

re box gratings removed, boxes scaled and coated and gratings resecured.

Main turbine rotor and stator casings and blading (rotor lifted) shafting and bearings,

a generator, propulsion motor, shafting and bearings, intermediate and thrust shafting and

rings opened out and examined.

Auxiliary turbo generator rotor and stator casings, blading, shafting and bearings, gears,

rotors opened out and examined. Main feed pump impellers and turbines, aux., feed pump, main and

circulating pumps, bilge, ballast, fire and sanitary pumps, oil fuel transfer pumps, lub., oil

rice pumps, main and aux., condensate pumps opened out and working parts examined. Main and aux.,

lensers examined and tested. Combustion control and service compressors examined. Air receiver

lined internally. P.T.O.

General Observations, Opinion, and Recommendation:— The machinery and boilers of this vessel are in good

(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, BS 9,11, B&MS 9,11 *LMC 9,11 or *LMC 140 lb., FD, &c.)

efficient condition and eligible in my opinion to have the notation of LMC 12-48 and with

ord of 2 W.T.B 500 lbs (Spt 464 lbs) HS. 11552. FD. 1361 M.N. made in the Register Book.

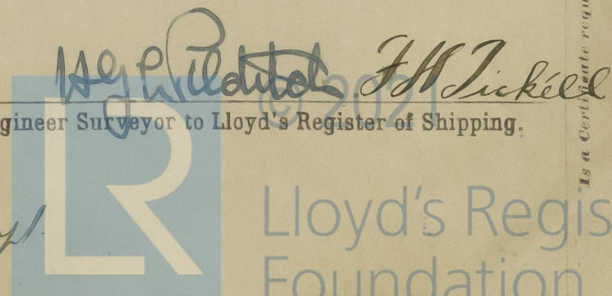
Survey Fee (per Section 29) **2 INCLUSIVE** Fees applied for **19**
 Special Damage or Repair Fee (if any) **2 FEE** Received by me, **19**
 Travelling expenses (if chargeable) **2**

Committee's Minute

Signed

4 FEB 1949
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Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation

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"ESSO MANCHESTER"

Valves, cocks, pipes and strainers of the pumping arrangements examined.

8. Both main boilers opened out and examined internally and externally together with superheater mountings and fittings. Both boilers tested hydrostatically at 450 lbs (W.P) and found

mountings and fittings. Both boilers tested hydrostatically at 450 lbs (W.P) and found tight. Drum safety valves of both boilers adjusted to 500 lbs/sq.in and superheater valves 464 lbs/sq.in and boilers examined under steam.

Oil fuel pumps examined and all valves, tanks, pipes and deck control gear of this oil fuel installation examined.

Fire fighting appliances examined. Steam smothering supplied only to the bottom of the boiler casing underneath furnace with separate control valve to each boiler in the stokehold and master control valve.

Cargo tanks and cofferdam steam smothering control valve at freeboard deck. The Lux system

1.5 of CO₂ fire fighting equipment is fitted in the following positions: Stokehold after bulkhead LOWER over engine room, after engine room, behind switchboard and control panel, and over main propulsion motor. Automatic controls in alleyway on freeboard deck. CO₂ batteries now well and proved full.

In addition portable CO₂ plant in stokehold and a number of hand foamite fire extinguishers of various sizes are placed in all compartments, and water hose connections provided on fire pump lines in all compartments.

Repairs now done.

01.08\adl 404 .jpg Main circulating pump impeller and shaft renewed.

Ingersoll-Rand feed pump turbine casing faces built up where scored between stage

Main condenser - 14 tubes renewed. Condenser tested.

Main motor air cooler - 1 tube renewed. Cooler tested.

Port boiler - 6 generator tubes cut out and renewed $1\frac{1}{2}$ diam. Found sagged slight

otherwise in order.

Stbd. boiler generator tube renewed; split at end in bell mouth. ^{ONE} ^{REV} ^{283NO 3A-88} ^{ONE}

A number of other repairs and adjustments made.

The M.N. has been calculated on a working pressure of 450 lbs/sq.in. 6000 S.H.P. and a vessel placed in hydrotest. Vessel examined. Propeller and all outside fastenings examined.

On completion of repairs the main and auxiliary machinery was seen under working

conditions in wet dock and all found satisfactory. *W. H. Carter*

ELECTRICAL EQUIPMENT

Auxiliary turbo generator rotor and stator casings, blading, shafting and bearings, gears,

chemical pumps, discs, ballast, fire and sanitary pumps, oil fuel transfer pumps, lub oil

towers opened out and examined. Main feed pump impellers and turbines, ex., feed pump, main and

These engines are tested internally. Compression control and service compressors examined. Air receiver

The machinery and boilers of this vessel are in good

different condition and eligible in my opinion to have the notation of LMC IS-48 and with

" ESSO MANCHESTER "

Electric Installation :- Now Done :- Electric classification survey carried out and recommended repairs and alterations complete.

Repairs:-

Main Alternator:- A new alternator rotor serial No S.E.R. 819746, S.P.F.C. 3209053 A.B. 439 H.T. 11/8/48 has been installed in place of the original rotor which was removed and fitted in the "ESBO LONDON"

The alternator was tested under working conditions after the contractors representatives had checked the balance of the rotor at all speeds both unexcited and excited and all found satisfactory. After the test under working conditions, the rotor vibration test was found to be "infinity".

Stator cable connections:- A sheet iron cover has been fitted to give mechanical protection.

Main Circulating Pump Motor Slot wedges renewed; stator winding phase to phase resistance tests made; Motor bearings renewed. Cargo and Stripping pump motors which had been immersed in salt water have been "dried out" and insulation tests are now satisfactory.

Navigation Lights:- An alternative supply has now been provided in accordance with RLL requirements.

Immulation resistance tests have been carried out on all equipment and circuits and those found below Rule requirements have been rectified.

Classification Requirements:- Lighting fittings in the Centre Cattle tween deck space have been replaced by certified flame proof fittings and the switches controlling these lights resited on the deck above. Socket outlets were removed from this space and also on the Foremast in way of vapour outlets. Forward Pump room switch removed.

The installation has been tested under working conditions after repair and found satisfactory.

Reports 13 and 4 d are in the course of preparation.

J. H. Tinkell