

No. 126099

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

(Received at London Office 22 OCT 1947)

of writing Report... 11. 10. 1947 When handed in at Local Office... 19... Port of **LIVERPOOL**

Survey held at **Birkenhead**. Date. First Survey **25. 8. 47** Last Survey **1. 10. 47** 19... (No. of Visits **8**)

on the Machinery of the ~~STEEL~~ **"TENAGODUS"** ex **"HORSESHOE"**.

Gross **10636** Vessel built at **Mobile, Ala.** By whom **Alabama D.D. & S.B. Co.** When **1944**

Net **6134** Engines made at **Lynn, Mass.** By whom **General Electric Co.** When **1944**

Boilers, when made (Main) (Donkey)

Owners **Anglo Saxon Petroleum Co. Id.** Owners' Address

Managers **-** (if not already recorded in Appendix to Register Book.)

Port **London** Voyage

Surveyed Afloat & in Dry Dock **Refined & binned holds** Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

Report No. Port

Particulars of Examination and Repairs (if any) **Docking. Gen Exam.**

Special Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the cause of Repairs, if any, 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 **no damage**

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? **no**

Donkey " " **none**

State for what reasons **BS3, 4, New York** 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 **not examined** Present condition of funnel(s) **Efficient**

Did the Surveyor examine the Safety Valves of the Main Boilers? **✓** To what pressure were they afterwards adjusted under steam? **500 lbs. Superheat 46 lbs.**

Did the Surveyor examine the Safety Valves of the Donkey Boilers? **✓** To what pressure were they afterwards adjusted under steam?

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

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

Has the shaft now been changed? **✓** If so, state reasons **✓** 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 **not examined** State the wear down in the

Turn bush **8** Is electric light and/or 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**

Engine parts, when referred to by numbers, should be counted from forward. **Complete**

Survey is not complete, state what arrangements have been made for its completion and what remains to be done

Now Done:-
Docking. Vessel placed in drydock. Propeller, valves and outside fastenings of sea connections examined and, with the exception of the ship side blow down valve, found satisfactory. Ship side blow down valve to be replaced by a cock.
Boilers. Safety valves of both boilers adjusted under steam; drums at 500 lbs per sq. inch and superheaters at 46 lbs per sq. inch. Satisfactory accumulation tests carried out. Fire fighting appliances (steam and chemical) checked and extended spindles verified.
Permanent steel guard fitted in front of fuel oil filters in boiler room.
General Examination. Main and auxiliary machinery generally examined under working conditions, in dock, and found satisfactory.

(SEE CONTINUATION SHEET)

General Observations, Opinion, and Recommendation:— **The machinery of this vessel,**

(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 3, 11, B&MS 3, 11 or LMC 3, 11 or LMC 140 lb., FD, &c.)
where now seen, is eligible in my opinion to be classed and to have record of Examined 10. 11. 47 subject to junction box and lighting fittings in centre stow away deck space being replaced by fittings of flameproof construction; remaining rule requirements to be complied with.

Survey Fee (per Section 29) £ : : Fees applied for **17 OCT 1947**

Damage or Repair Fee (if any) £ **15 15 0** Received by me, **H. Greenhalgh**

(per Section 29.) Selling expenses (if chargeable) £ : : 19

LIVERPOOL 21 OCT 1947

Committee's Minute **As now**

Signed **Project**

Engineer Surveyor to Lloyd's Register of Shipping.

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T.E.S. "TENAGODUS"

Electrical Installation. Electrical equipment, alternators, generators, motors, switchboards, cables and fittings generally examined on completion of minor repairs. Insulation resistance tested.

A complete set of electrical plans, not available at this time, are being prepared.

It is recommended that the junction box and lighting fittings in the Centre Castle Tween Deck space be replaced by fittings of flameproof construction.

Electrical Repairs. The insulation resistance of the main alternator rotor was found to be low. Rotor end bells removed, insulation cleaned as far as practicable and part reinsulated, megger tested and found satisfactory. Rotor replaced in ship and dynamically balanced in place by B.T.H. Co. Ltd. Turbo set was run for about 12 hours without load but with excitation current and found satisfactory.

Machinery Details. See also First Entry Report attached.

Main Alternator set. Turbine G.E.C. no. 61496 10 stage 3415 r.p.m.

Alternator G.E.C. no. 5840416. Type ATB2. 5000 KVA.

2340 V. 62 pu sec. 3 ph. 110 V. excitation.

Propulsion motor. Synchronous. Type TSM80. no. 5690414. 6000 HP at 90 r.p.m.

2300 V. 4625 KVA. 120 V. excitation.

Aux. Alternator sets (2 off). Turbine S.R. geared to 525 KVA alternator and 45 KW. 110 V. D.C. generator.

Two main turbo feed pumps. (200 GPM)

One vert. simplex aux. feed pump. 130 GPM

Main circulating pump (ED). 14000 GPM

Aux Condenser circulating pump (ED). 3000 GPM.

Two main Condenser Condensate pumps (ED). 180 GPM

One aux. Condenser Condensate pump (ED). 90 GPM.

Two lubricating oil pumps (ED). 60 GPM.

Two fuel oil pressure pumps (ED). 15 GPM.

Fuel oil transfer pump (fuel pump room). Steam duplex. 400 GPM.

Two bilge pumps (mach. space) (ED). 200 GPM.

Bilge & ballast pump (fuel pump room). Steam duplex. 300 GPM.

One C.S. pump (ED). 450 GPM

One fire & Buttermilk pump (ED) 450 GPM

Steering gear. 2 Electro-hydraulic.

Propellers. 4 bladed solid bronze 19'6" diam. 14'6" pitch. 1383 ft.

Main injection valves (high and low) 24 1/2" diam.

Bilge injection 18" diam.

End



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