

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

(Received at London Office)

FEB 24 1938

Date of writing Report 19 When handed in at Local Office 22/2/1938. Port of **NEWCASTLE-ON-TYNE**
 No. in Survey held at **Newcastle on Tyne** Date, First Survey 28 July 1937 Last Survey 13 Feb 1938
 Book. 1780 on the Machinery of the **Wood, Iron or Steel Motor Tanker BRITISH PETROL** (No. of Visits 50)
 Gross 6906 Vessel built at **Newcastle** By whom **Swan Hunter & W. Richardson Ltd** When 1925-9
 Net 4113 Engines made at **Barnor** By whom **Vickers-Armstrong** When 1938-2
 1168 Boilers when made (Main) ✓ (Donkey) 1925.
 Nominal Horse Power of Main Boilers Owners **British Tanker Co Ltd** Owners' Address
 (if not already recorded in Appendix to Register Book.)
 of Donkey Boilers 2 Managers Port **LONDON** Voyage
 Main Boilers # Surveyed Afloat & in Dry Dock **Swan, Hunter & W. Richardson Ltd**
 Donkey Boilers 150 lb (State name of Dock.)

st Report No. Port
 Particulars of Examination and Repairs (if any) **Damage, LMC & Eyes.**

Special Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the nature and extent of examinations and subsequent repairs. Repairs on the cause of which must be stated should be separated from repairs due to other causes; and being detailed in the body of the report, should be briefly summarised at the end of the report. State also the 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 has rendered his services for this purpose, and why they were declined **not required**

Has a damage report been made by anyone else? If so, by whom? **Underwriters Surveyors Swan, Macfarlane.**

Has the Surveyor personally gone inside each Main Boiler separately and made a thorough examination at this time? ✓

Donkey " " " " **Yes, both**

Has not done, state for what reasons? ✓

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

Have 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 **2 Donk. Bln. 10/8/37 & 6/1/38.** Present condition of funnel(s) **good**

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

Has Surveyor examined the Safety Valves of Donkey Boiler? **Yes** To what pressure were they afterwards adjusted under steam? **150 lbs**

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

Has Surveyor examined the drain plugs of the Main Boilers? ✓ and of the Donkey Boiler? **none**

Has Surveyor examined all the mountings of the Main Boilers? ✓ and of the Donkey Boiler? **Yes**

Has the shaft now been drawn and examined? **Yes** Is it fitted with continuous liner? **Yes** 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? **Yes** If so, state reasons **Placed on board as SPARE**

Has the shaft now fitted been previously used? **No** Has it a continuous liner? **Yes** Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? **no**

Date of examination of Screw Shaft **12/1/38** State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft **Close fit. Re worked.**

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

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

Now done: 1st Damage Examination made on account of damage sustained through the crank shaft of main engine fracturing at the after side of middle coupling on 23rd June '38. When vessel was on a voyage from Haifa to Port de Bouc.

The crank shaft was found to have fractured and broken at the after fillet of the middle coupling, i.e. the forward journal of no 5 crank. The fracture was ragged and uneven break, so that, with the turning of the engine after rupture, the two sections of the crank shaft were forced about 2" apart, and the crank webs were jammed hard against the main bearings. The main engines were dismantled, and in order to remove the crank shaft, it had to be cut in way of the fracture by O.A. gas burner.

All the journals of both portions of the crank shaft were found to be started.

The main engine bedplate was found fractured at 27 places in the horizontal webs ribs on the main bearing girders or bridges, and the Entablature Sections were found fractured.

General Observations, Opinion, and Recommendation:—

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, R.&M.S. 9.11, & L.M.C. 9.11, or R.L.M.C. 140 lb., F.D., &c.)

The Machinery of this Vessel is in good safe working condition, eligible in my opinion to remain as classed and to have records + L.M.C. 2.38, D.B.S. 2.38, T.S. 1.38, + N.E. 2.38, 25C.D.A.

Fee (per Section 29) Compl. CS 5: - - - Fees applied for
 " " " " 3: 0: 0 19
 " " " " 4: 0: 0
 1 Damage & Repair Fee (if any) £26: 5: -
 (per Section 29.)
 Billings expenses (if chargeable) £

Committee's Minute

Signed

+ L.M.C. 2.38

+ N.E. made 32 fitted 2.38

D.B.S. 2.38

Received by me,

1938 Feb 15/3
 26.5/38 22/3/38 23/3/38

CERTIFICATE WRITTEN

A Watt, W. Badger, W. Nicholson
 Engineer Surveyor to Lloyd's Register of Shipping.

W351-0023

Lloyd's Register
 Foundation

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

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

Machinery of the Steel Motor Tanker "BRITISH PETROL"
between the bolt holes securing them to the columns.

The Owners decided to fit New Engines, and a 6 cylinder Vickers-M.A.N 2 S.C. Double Acting Engine has now been installed as reported in Barrow Report no 2456. and New Rpt. for New Machinery Installation.

The Vessel was placed in dry dock. Propeller, stern bush, Screw Shaft (drawn in), Sea Valves & Cocks with their shell fastenings examined and found or now placed in good condition.

As stated above, the old engines have been removed, and a New Engine fitted, together with new Shafting from Engine to Screw Shaft.

The whole of the Auxiliaries have been opened up & examined, & found or placed in good order, as follows:-

- the two 42 KW. 2 Cylinder Auxy. Oil Engines & the 10 KW. Steam Dynamo Set;
- the Steam Engine driven Air Compressor;
- the 2 Starting Air Receivers for Main Engines, with mountings;
- the 2 Starting & 2 Injection Air Receivers for the 2 Auxy Oil Engines;
- the 3 Injection Air Receivers for the Old Main Engines.

Note: These are not required for use on the New Main Engines and have now been connected for use on the 2 Auxy Oil Engines.

Pumps, pumping arrangements & piping;

Daily Service Oil Fuel Tanks with fittings;

Steam pipes (S.D. Copper), those over 3" bore were tested to twice WP.

Windlass & Steering Gear.

Electric installation - See separate sheet.

DBS: The two Donkey Boilers were examined internally & externally with doors, mountings & safety valves, found or placed in good condition and the safety valves were afterwards adjusted under steam as stated on front page.

Repairs due to wear & tear;

Both the Auxy Oil Engines overhauled generally.

Steam driven Air Compressor - Crank shaft of Air Compressor was found fractured at fillet of journal to web next flywheel - A new crankshaft has now been fitted, and Compressor and its steam engine overhauled & adjusted.

Pumps overhauled generally.

Port Donkey Boiler - 14 screw stays renewed.

P.T.S. Donk. Blr - mountings overhauled generally.

Stern bush re wooded & bored out.

Old working Screw Shaft - sent to shop & Ct. machined parallel in way of stern bearing, and Shaft Kept as Spare.

The Unused Spare Screw Shaft marked LLOYDS 7549, J.D. 8.10.34

Alterations; A new Solid 4 Bladed Bronze Propeller fitted to suit new Engines a Cast Iron Spare Propeller supplied.

A new Additional Steam driven Air Compressor has been fitted. Two new Bilge Pumps - one Steam driven and one 5" Centrifugal Motor driven have been fitted. - for further particulars See Attached Installation Rpt.

M. V. "British Petrol"

Elec. Instⁿ

A new auxiliary switchboard has been fitted. The following additional motors complete with starters & control gear has been installed

- 1 - Bilge pump 18 H.P.
- 2 - Fuel valve cooling pump 3.5 H.P.
- 1 - Oil Separator 2 H.P.
- 1 - Turning motor 9 H.P.

The following motors were wired 1 - piston cooling pump, 1 jacket cooling pump, 1 engine fuel oil pump.

Engine room lighting rewired throughout. Emergency lighting rewired. Cargo hoists 4 in 10 rewired. Navigation circuits overhauled & partly rewired.

A plan of the above alterations will be forwarded as soon as ready, also test certificates when received from the engine works. The insulation resistance is good.

The dynamos, governors, main board, fuses, cables, fittings & all auxiliaries ex^a & tested under working conditions & found satisfactory

W. I. Badger

RETAIN