

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

(Received at London Office,

30 MAR 1945

Date of writing Report

19

When handed in at Local Office

27 MAR 1945

Port of

SUNDERLAND

No. in  
Book.

Survey held at Sunderland

Date, First Survey Dec 7

Last Survey

16 19 45

(No. of Visits 23)

on the Machinery of the Wood, Iron or Steel

APPLELEAF

Year. Month.

Gross 5892  
Net 2480

Vessel built at Belfast

By whom

Workman Clark & Co. Ltd. When 1917 2

Engines made at do.

By whom

do.

When do.

nominal  
Horse Power 1102

Boilers, when made (Main)

1917

(Donkey)

of Main Boilers 6

Owners The Admiralty

Owners' Address

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

Port London

Voyage

of Donkey Boilers

Managers

Pressure 200 lb

If Surveyed Afloat or in Dry Dock

(State name of Dock.)

Greenhill

Particulars of Classification (which must be inserted  
precisely as in Register Book & Supplements).

CHARACTER.  
\* for Special Survey  
Date of last Survey and of  
Periodical Surveys.

Years  
elapsed  
since  
last  
survey.

Machinery and Boiler  
Surveys  
(including date of N.B., if any).

+100 R,  
11.43.

+A.M.C.  
7.36.

N. L. No. 3-11-29

13.12.43

N. H. K. No. 3-36

Examinated

Carrying petroleum

in bulk

Altered oil fuel 2.17.50

11.43.

Last Report No.

Port

B.S. G.E.

Particulars of Examination and Repairs (if any) Working

Medical Surveys, when held, must be reported in detail and verbatim in the terms of the Rules. State clearly 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.

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

Is 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?

Did the Surveyor personally go inside each Donkey Boiler separately and make a thorough examination at this time?

Was this 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?

What was the latest date of internal examination of each boiler? Feb 27.2.45. aft 8.3.45

Did the Surveyor examine the Safety Valves of the Main Boiler?

To what pressure were they afterwards adjusted under steam? 200 lb.

Did the Surveyor examine the Safety Valves of Donkey Boiler?

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?

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 it a continuous liner?

Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? yes

Has the shaft now fitted been previously used?

State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft. good fit

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?

Was the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms?

Is the Survey not complete, state what arrangements have been made for its completion and what remains to be done. G.E. & B.S. Complete: subject

Done:-

see comments

Examined in dry dock propeller and outside fastenings examined. Propeller blades somewhat corroded but efficient. Outside coupling on starboard side found slack and after repairs, the shaft in way gauged and found to be slightly out of truth but efficient for proposed service.

The main engine reported to be running well except that low pressure piston pin ring studs had broken. The low pressure pistons and cylinders examined. The main circulating, ballast, feed and general service pumps examined, repaired and tried under working conditions. The oil burning installation examined under working conditions. Steaming engine & whidder tried & found satisfactory p.t.o

General Observations, Opinion, and Recommendation:-

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

The machinery of this vessel, as now run, is in an efficient condition and suitable, in my opinion, to remain as classed with fresh Record of Examination 3.45 and B.S. 3.45 subject to the repairs of the port & starboard boilers of the after section being examined or renewed before the end of September 1945.

Survey Fee (per Section 29)

£ 7 : - : -

Fees applied for

Special Damage or Repair Fee (if any)

£ 6 : 6 : -

7 MAR 1945

Travelling expenses (if chargeable)

£ 2 : 2 : -

Received by me,

Committee's Minute

FRI. 27 APR 1945

Assigned

B.S. 3.45 subject

L. R. Home.  
Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register  
Foundation



The following steam pipes examined internally: Fore boiler room main steam to port boiler and expansion gland; Centre boiler auxiliary steam pipe and one flanged end of second pipe; after boiler room main steam to Starboard boiler and expansion gland; Centre boiler auxiliary steam pipe and one flanged end of second pipe; In Engine room: The two main separators and the cross connection to the Auxiliary range from the port separator. The flanges of the remaining main & auxiliary pipes are 3" dia. examined externally. No corrosion found.

The main boilers examined in their entirety and their safety valves adjusted under steam. The furnaces in the fore section were found somewhat distorted and where there were flats the furnaces were jacked as detailed below. The furnaces of the port & starboard boilers of the after section (except the centre furnace of the starboard boiler) were found considerably distorted and repaired as detailed. It is recommended that these furnaces be examined again in six months time or renewed. The Superintendent states that it would be possible to arrange that only one section of boilers was used <sup>at a time</sup> on the vessel's present service, and that the remainder could be kept dry for three months at a time. If this is done the limit might, in my opinion, be safely extended from six to twelve months.

#### Repairs:-

The starboard coupling between tube & screw shafts, parted, cleaned & remade with new bolts. The shaft then gauged and found to be about  $\frac{1}{16}$ " out (the surfaces being very rough).

All junk ring bolts in the low pressure pistons renewed (old ones being coarsely crystalline).

Water ends of fire & general service and engine room bilge pumps renewed.

Port circulating pump overhauled & relined.

Starboard circulating pump overhauled: the steam engine casing, found cracked about the level of the top end of the overhead guide, repaired by external patching & engine relined.

Fore pumps, manoeuvring stop valves, evaporators & distillers overhauled.

Fore Boilers:- mountings generally overhauled. Port boiler port furnace, Centre boiler starboard furnace and starboard boiler centre furnace jacked fair. A few screw stays renewed & minor welding repairs effected.

After Boilers:- 2 rings welded onto each furnace of the port boiler and to the port furnace of the starboard boiler. The starboard boiler starboard furnace and the centre boiler centre furnace jacked. Mountings overhauled or minor caulking & welding repairs effected as necessary.

Slight pitting of the tubes noted in all boilers. This did not appear to be active. One plain tube withdrawn from each boiler & the depth of the pitting found to be slight.

#### Electrical Installation - Repairs and General Examination

Main switchboard overhauled and new fuse carriers fitted. Engine room, tunnel, boiler room, gallery, stores, midship accommodation and forward accommodation part rewired. Main cables on fore-and-aft gangway provided with additional supporting cleats in way of junction box aft of midship house. Equipment run under working conditions on completion of repairs and examination resistance of all circuits measured and found good. This equipment is now in my opinion in safe working condition.

G. Harrison