

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

(Received at London Office

JUN 10 1938

Date of writing Report 16/5/38 When handed in at Local Office 17/5/38 Port of Kobe.

No. in Survey held at Osaka. Date, First Survey 14/4/38 Last Survey 7/5/38.

4797 on the Machinery of the ~~Wood Iron~~ Steel S/S "FEDERAL" (No. of Visits Seven.)

Gross 6868 Net 4809 Vessel built at Kearny, N.J. By whom Federal S.B. Co. When 1918

Engines made at Schenectady. By whom General Electric Co. When 1918.

Boilers, when made (Main) 1918 (Donkey) --

Owners G. E. MARDEN Owners' Address 2, French Bund, Shanghai.

Managers Port Shanghai Voyage

If Surveyed Afloat or in Dry Dock Both Particulars of Classification (which must be inserted precisely as in Register Book &amp; Supplements).

If Surveyed Afloat or in Dry Dock Both Osaka Iron Works, Chikko Yard.

Particulars of Examination and Repairs (if any) LMC &amp; TS AND RECLASSIFICATION

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

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? Yes.

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

Was this 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? --

What was the latest date of internal examination of each boiler? April, 1938 Present condition of funnel(s) Good

Did the Surveyor examine the Safety Valves of the Main Boiler? Yes. To what pressure were they afterwards adjusted under steam? 210 lbs.

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? Yes. , and of the Donkey Boilers? --

Did the Surveyor examine the drain plugs of the Main Boilers? -- , and of the Donkey Boiler? --

Did the Surveyor examine all the mountings of the Main Boilers? Yes. , and of the Donkey Boiler? --

Has the screw 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? 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? --

What was the date of examination of Screw Shaft? 5/38. State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft Close fit.

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

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

WORK DONE:- Vessel placed in dry dock, propeller, stern tube and bush, sea cocks and valves with their shell fastenings examined and found or now placed in good condition.

Tail shaft with continuous liner examined and found in good condition.

Turbine with double reduction gearing opened up for survey:-

Turbine casings, rotors, rotor discs, blading and rotor shafting, thrust and tunnel

shafting, condenser, pumps, piping and pumping arrangements examined and found or now placed in good condition.

The steam and feed pipes were tested by hydraulic pressure to twice the working pressure.

Electric Fittings examined, megger tested and found or now placed in good order.

The 3 Main Boilers were examined over all parts with doors, mountings and safety valves and found or now placed in good condition. Safety valves adjusted under steam as stated above.

To complete the Survey:- The spare gear requires to be placed in order and verified. (P.T.O.).

General Observations, Opinion, and Recommendation:- The machinery and boilers 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, B.S. 9,11, B.&M.S. 9,11, & L.M.C. 9,11, or

\*LMC 140 lb., F.D., &c.)

are in good condition and eligible, in my opinion, to be reclassified with record of \*LMC 5,38 and

tail shaft (CL) seen 5,38 when the spare gear has been placed in order and verified.

First Entry Fee,.....Yen 102:86

Survey Fee (per Section 29).....Yen 605:43

Electrical Fittings.....Yen 101:57

Assessment Fee (if any) (See Hull Report)

Surveying expenses (if chargeable).....£ : :

Committee's Minute

Signed + LMC 5,38 subject

At the Ship's side

Received by me, 30.6.1938

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 24 JUN 1938

CERTIFICATE WRITTEN

006175-006188-0245 1/2

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

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



REPAIRS DUE TO WEAR AND TEAR:-

Stern bush re-wooded.

A few minor repairs, renewals and adjustments have been carried out.

Safety valves adjusted under steam.

The main propelling machinery of this vessel consists of a single five stage, Curtis turbine made by the General Electric Co., Schenectady, U.S.A. developing 2500 S.H.P. at 3380 revolutions per minute and driving a single screw, at 90 revolutions per minute, through double reduction gearing.

From the marks on the shafting it appears that this is the original, made under the supervision of the Society's Surveyors, with the exception of the screw shaft which is marked A.B. 5/2/28 No. 374 D.

The sizes of the shafting meet the requirements of the Rules.

The marks on the boilers are not decipherable. The boilers are 15'-6" diameter by 11'-6" long.

The oil firing arrangements have now been removed and the boilers have been fitted to burn coal under forced draught.

The electrical machinery consists of two 10 K.W. dynamos driven by steam reciprocating engines.

Superheaters, made before it was decided to reclass this vessel, have now been fitted to my satisfaction. Plans of these are being forwarded herewith. The scantlings of the superheaters are ample and the steel tubes which were made at approved Works, (although not made under the supervision of the Society's Surveyors) have now been subjected to expanding and flattening tests with satisfactory results.

The completed superheaters were tested by hydraulic pressure to 1000 lbs per square inch before fitting on board and to 500 lbs. per square inch when finally erected in place.

The spare gear is not in order, but the Owners state that this will be supplied and an early opportunity afforded for this to be verified by the Surveyors.

The main and auxiliary machinery was tried under working conditions and found satisfactory.

*C. Macpherson*