

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

(Received at London Office)

Date of writing Report 27<sup>th</sup> Sept 20 When handed in at Local Office 28<sup>th</sup> Sept 1920 Port of FalmouthNo. in Survey held at Falmouth Date, First Survey 16<sup>th</sup> Aug Last Survey 24<sup>th</sup> Sept 1920No. of Visits 12 Master R. BerghardTonnage Gross 2175 Net 1591 Vessel built at Seattle, Wash By whom Elliott Bay S.S. Co. When 1918Registered Horse Power 142 Engines made at Cleveland O By whom Winton Eng Works When 1918No. of Main Boilers 1 Boilers, when made (Main) (Donkey) 1918No. of Donkey Boilers 1 Owners American Motor Ship Co. (Inc) Port New York Voyage Houston TexasNo. of Pressure in Main Boilers 160 lb If Surveyed Afloat or in Dry Dock afloat (State name of Dock.)Last Report No. 73263 Port NwcParticulars of Examination and Repairs (if any) Mach. Damage

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

In 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? Report given Was a damage report made by anyone else? If so, by whom? H. Thomas Esq. for the underwriters

Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? noTo. " Donkey " " " noIf his was not done, state for what reasons? Donkey boiler in useAnd what parts of the Boilers could not be thus thoroughly examined? noAlso 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? noDid the Surveyor examine the Safety Valves of the Main Boiler? no To what pressure were they afterwards adjusted under steam? noDid the Surveyor examine the Safety Valves of Donkey Boiler? no To what pressure were they afterwards adjusted under steam? not adjustedDid the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? no , and of the Donkey Boiler? noDid the Surveyor examine the drain plugs of the Main Boilers? no , and of the Donkey Boiler? noDid the Surveyor examine all the mountings of the Main Boilers? no , and of the Donkey Boiler? noHas screw shaft now been drawn and examined? no Is it fitted with continuous liner? no or two liners? no or is it without liners? noHas shaft now been changed? no If so, state reasons noIs the shaft now fitted new? no Has it a continuous liner? no or two liners? no or is it without liners? noState the distance between lignum vitae of stern bush and top of after bearing of screw shaft? not seenIf the Survey is not complete state what arrangements have been made for its completion and what remains to be done? To complete the survey for damagethe crank shaft of the port air compressor requires to be renewed.The chief engineer states that this will be done on arrival at a home port, whenthe engines will also be opened out for survey, the donkey boiler will be repairedand permanent repairs effected to windlass (Newcastle report)Now done - Repairs to damage stated to have been sustained between the datesof the 10<sup>th</sup> and 12<sup>th</sup> August 1920 whilst on a voyage from the Tyne to Houston,Texas, and believed to have been caused by the suction valve in the third stageof the starboard air compressor breaking and being forced through the dischargeport, thus damaging the third stage cover. For particulars please see log booksThe starboard air compressor was disconnected, taken ashore to shops, stripped forexamination and the following repairs carried outThe third stage chamber bored out, suction valve, plunger and rings renewedP.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, &amp;c.: thus, for example, B.S. 9, 11, B.S. 11, or S.L.C. 9, 11, 140 lb., F.D., &amp;c.)

This machinery is now so far as seen in safe working condition and eligiblein my opinion to remain as classed without fresh record of survey andsubject to the engines being opened out for examination and the surveybeing completed as above on arrival at a home portSurvey Fee (per Section 28) £21 0 0Special Damage or Repair Fee (if any) (per Section 28.) £21 0 0Travelling Expenses (if chargeable) £Fees applied for 20<sup>th</sup> Aug 1920Received by me, 20<sup>th</sup> Aug 1920Committee's Minute FRI. OCT. 1 1920Assigned As now subjectDeferredable toLloyd's RegisterFoundation



and spare cover fitted (This cover had previously been in use, and on account of the discharge valve seat being too deeply machined, the discharge valve projected through into chamber and prevented clearances being adjusted as freely as desirable)

Second stage rings made workable, one ring renewed and new suction valve fitted

First stage piston, chamber, and connecting rod top end bush filed up and hand dressed; crank pin brasses renewed and refitted

All reassembled and tried under working conditions, but the boring out of the third stage chamber was not satisfactory, and overloads were set up in the second and first stages owing to the third stage leaking, with the result that the crank pin became overheated and the white metal ran out

After this trial and the third stage chamber having worked somewhat smoother new rings were fitted to the third stage plunger, and the crank pin bearing was renewed, all reassembled and the engines again tried under working conditions, with the former result viz. that owing to excessive pressures in the first and second stages, the crank pin bearing again became badly overheated

A floating reamer of proper size was then made and the third stage chamber reamed out in a large vertical drilling machine; new third stage rings fitted all reassembled and tried under working conditions, when, during this trial the third stage suction valve again broke, further damaging the already defective cover fitted. This cover was removed and the former somewhat damaged cover refitted with new suction valve, and a further trial of the engines made with the result that excessive pressures in the first and second stages again caused the white metal in the crank pin bearing to become overheated and run out.

An entirely new air compressor, complete, was then obtained from the makers, fitted in place, tried under working conditions with satisfactory results, and also a complete new air compressor has been placed on board as spare

In the port engine the forward end of the air compressor crank shaft was found to be broken off, but as the fracture was clear of the forward bearing and the broken off part only carries the worm wheel of the hand turning gear, this does not in my opinion interfere with the safe working of the engines for the present voyage

A. T. Graham.

Oil Engines, Annual Survey  
due 5.20 & repairs to the  
diesel boiler to be done at  
the next port

Damage repairs. New start.  
Compressor fitted etc.

FRI. 8 SEP. 1922

the crank shaft of the  
port air compressor being  
renewed & the D/B  
repaired.

TUE. 4 JUL. 1922

Deferred

W. H. K. 1922

TUE. 4 JUL. 1922

Deferred  
due Aug

W. H. K. 1922

FRI. 8 SEP. 1922

Deferred

Underbaking

FRI. NOV. 24 1922

In port Damaged 1120

W. H. K. 1922