

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

REC'D NEW YORK Jan. 12/1918  
 Date of writing Report Jan 10, 1918 When handed in at Local Office Jan 10, 1918 Port of Boston, Mass.  
 No. in Reg. Book. Survey held at Boston, Mass. Date, First Survey 24th Dec. Last Survey Dec. 31, 1917.  
 1407 on the Machinery of the Wood, Iron or Steel S.S. "HARRINO."  
 Tonnage Gross 4484 Net 2843 Vessel built at Glasgow By whom J. & W. Henderson & Co. Ld. When 1906 8.  
 Registered Horse Power 485 Engines made at Glasgow By whom J. & W. Henderson & Co. Ld. When 1906.  
 No. of Main Boilers 3 Boilers, when made (Main) 1906 (Donkey)  
 No. of Donkey Boilers 1 Owners Thinder, Anderson & Co. (Mgr. Port) London Voyage France.  
 Steam Pressure in Main Boilers 200 If Surveyed Afloat or in Dry Dock Simpson's Dry Dock.  
 in Donkey Boilers (State name of Dock.) and Leyland Line Pier.

Last Report No. Port

## Particulars of Examination and Repairs (if any) Docking &amp; Bank Ship

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? Was 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?

Do. " Donkey " " "

If this was not done, state for what reasons?

And, what parts of the Boilers could not be thus thoroughly examined?

Also 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?

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

To what pressure were they afterwards adjusted under steam?

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 Boiler?

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?

, and of the Donkey Boiler?

Has screw shaft now been drawn and examined?

Is it fitted with continuous liner?

or two liners?

or is it without liners?

Has shaft now been changed? If so, state reasons

Is the shaft now fitted new?

Has it a continuous liner?

or two liners?

or is it without liners?

State the distance between lignum vitae of stern bush and top of after bearing of screw shaft?

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

H.P. section of crank shaft to be again examined (or renewed) after the present voyage Boston to France & return.

## Docking

The vessel was placed in dry dock. The tail shaft, fitted with continuous liner, was drawn in, examined, found good & refitted. The lower half of the stem bush was re-wooded. One cast steel blade on the propeller was removed & replaced by a bronze blade.

The propeller, stem bush & fastenings of the sea cocks were examined while the vessel was in dry dock & found in good condition.

## 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, or S.L.M.C. 9, 11, 140 lb., F.D., &c.)

The machinery of this vessel is now in good & safe working condition & eligible in my opinion to remain as classed & to have record of TAIL SHAFT SEEN 12.17, subject to the H.P. section of crank shaft being again examined (or renewed) after the present voyage from Boston to France & return.

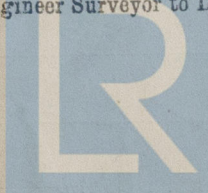
Survey Fee (per Section 28) £ : : Fees applied for Dec 31 1917.  
 Special Damage or Repair Fee (if any) £ 35.00 Received by me, Jan 7, 1918.  
 Travelling Expenses (if chargeable) £ : :

Committee's Minute New York JAN 15 1918

Assigned

As now subject  
 T.S. 12.17

John S. Heck.  
 Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register  
 Foundation

w969-0025 42



The crank shaft has been examined throughout, the Surveyor having recommended that the repaired H.P. section should be again examined or sent to Boston.

It is submitted that this vessel is eligible to remain as CLASSED.

Without restriction or views being put forward to the ship but subject to the H.P. crank shaft being again examined on return to Boston.

note reviewed by

12.14

12.14

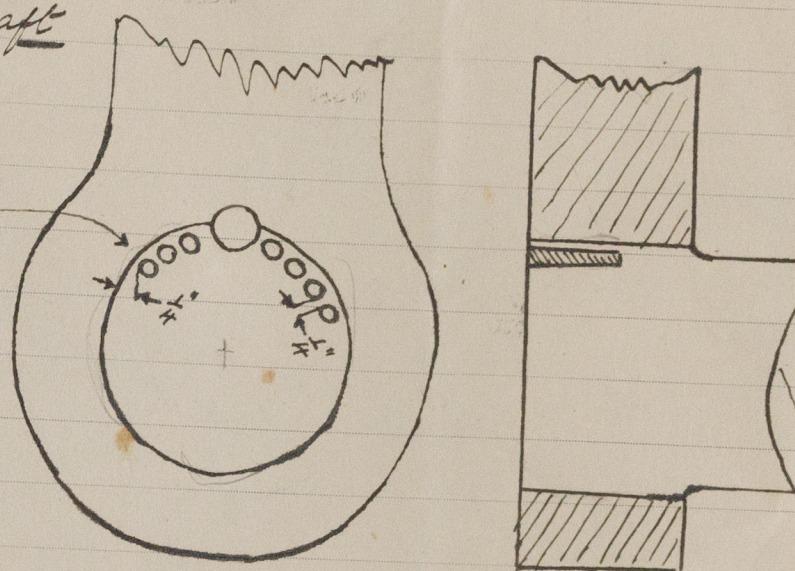
12.14

Machinery of

S/S ARRINO of London

Crank Shaft

7-1/4" slightly tapered hard steel pins driven into journal to make same tight in crank web



The after journal of the H.P. crank shaft had been found slack in the crank web on the previous voyage as per Boston report No. 945. A temporary repair had been made by drilling 7-1/4" holes in the journal & driving hard steel pins into the same to make the shaft tight in the web, as shown on sketch above.

How done

The H.P. section of crank shaft was examined. The temporary repair described above was found still strong & efficient & in my opinion, it is in safe working condition for the present voyage from Boston to France & return. It is respectfully submitted however, that this temporary repair weakens the shaft somewhat, & that it should be again examined on the vessel's return to Boston. It was understood from the chief engineer that this section might be renewed at or before that time.

The iron forward journal of the H.P. section was examined & found in good condition.

The M.P. section of crank shaft was examined & found in safe working condition.

The L.P. section of crank shaft was examined & found in good condition.

John S. Heck