

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

(Received at London Office)

MON 21 JUN 1897

Date of writing Report *June 15<sup>th</sup> 94* When handed in at Local Office *is* Port of *Clayton*  
 No. in Reg. Book. *162* Survey held at *Clayton* Date, First Survey *May 21<sup>st</sup> 94* Last Survey *13<sup>th</sup> June 1894*  
 on the Machinery of the Wood, Iron or Steel *Iron* Master *N. B. Sommer*  
 Tonnage { Gross *3880* Net *2674* Vessel built at *Belfast* By whom *Hortman & Co.* When *1894* Boilers, when made (Main) *1894* (Donkey) *1894*  
 Registered Horse Power *398* Engines made at *"* Owners *China Mutual S. M. Co.* Port *London* Voyage  
 No. of Main Boilers *2* No. of Donkey Boilers *1*  
 Steam Pressure in Main Boilers *180* If Surveyed Afloat or in Dry Dock *both* (State name of Dock, *J. W. Henderson & Co.*)  
 in Donkey Boilers *180*

Last Survey No. Port

## Particulars of Examination and Repairs (if any)

(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.)

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

CHARACTER. Is for Special Survey. Date of last Survey and of Periodical Surveys.	Years Assigned before expired.	Machinery and Boiler Surveys (including date of N.B., if any).
<i>+100 Ad 12/96</i>		<i>+L.M.C 10/94</i>

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?

At 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?

Has the propeller shaft been drawn and examined at this time?

If spare propeller shaft fitted, state whether new?

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

On account of damage to the stam tube and the wearing out of the lignum vitae wood in the bush, a new stam tube with bushing complete has now been fitted in place of the one damaged & broken (which is of MacColl & Maston's description). The propeller shaft has also been replaced by the spare one fitted with brass liners to suit the new tube. The after bulkhead repaired and stam tube thoroughly secured thereto. The Tunnel Shaft seats which were shaken & rivets loosened, re-riveted, and the after bearing block renewed and all the others overhauled & fitted with new bolts where necessary. Three lengths of Tunnel Shaft faired up & trued in the lathe and the spare Thrust Shaft fitted in place of another length of Shaft found defective (until a new one can be prepared). Thrust & Blank Shaft bearings overhauled. Two new propeller blades (bronze) have been renewed to replace one entirely lost; and one broken & damaged.

## 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. 9.95, B.&M.S. 9.95 or L.M.C. 9.95, 140 lb., F.D., &c.)

The above repairs and those stated on Continuation Sheet have been carried out by Messrs J. W. Henderson & Co. and the machinery in good working condition and eligible in my opinion to remain as classed in the Register Book.

Office or Registration Fee (per Sec. 27) £ : :  
 Survey Fee (per Section 28) £ : :  
 Special Damage Fee (per Section 28) £ *5 5* :  
 Travelling Expenses (if chargeable) £ : :

Fees applied for

*14/6 1894*

Received by me,

*21/6 1897*

Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

\*State if Certificate is required

WED, 23 JUN 1897

Committee's Minute

Assigned *as now*

GLS178-0076 (112)



When under way, the screw shaft & gear thrust  
shaft fitted in the place of a turner. N.B.—If this Report is copied by Copying Press, special care must be taken that the copying paper is not so much damped as to spread the ink, or cause it to show through to the other side.  
shaft) & moderate repairs to engine & rig  
to damage.

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

The Surveyor should be requested  
to state whether the screw shaft  
now fitted is a screw one also whether  
the new stern tube is MacCallum's Patent.

*H. L.*  
23.6.97

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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Foundation



MON 21 JUN 1897

Port of *Glasgow* Continuation of Report No. *15300* dated *June 15* <sup>*th* 1897</sup> on the*S. S. "Copack"*

*This damaged one has been sent to the makers to have a new portion burnt into the edge of it, & then to be put on board as spare.*

*In addition to the aforementioned damage repairs, the after bulkhead has been stiffened by doubling plates, the Lummel shafting seats for bearing, have been fitted with an additional angle at bottoms, riveted to the top of double bottom; several pieces of angle bar introduced and riveted into the Engine seating which stands about 12" above the double bottom a considerable number of rivets renewed particularly in the central portion of the seating where they could be got at and around the outer flanges of the sole-plate. Long bolts have been substituted with heavy fernule pieces fitted between the top of double bottom and seating so as to make the whole thoroughly secure.*

*James Molleson*