

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

Date of writing Report 6-10 15 When handed in at Local Office
 No. in Reg. Book. Survey held at LISBON Port of LISBON
 2004 on the Machinery of the IRON Date, First Survey 24/9/15 Last Survey 3/10/15
 Tonnage Gross 876 Net 528 Vessel built at Glasgow By whom Barclay, Curle & Co
 Registered Horse Power 18 Engines made at Leith By whom Hawthorn & Co
 No. of Main Boilers 1 Boilers, when made (Main) 1889. When 1864
 No. of Donkey Boilers 1 Owners Leith, Hull & Ham. S.P. Co. Ltd., Port Leith When 1889
 Steam Pressure in Main Boilers 150 If Surveyed Afloat or in Dry Dock Afloat Voyage Sevilla & Int. Ports
 in Donkey Boilers 50

Last Report No. 67857 Port Wre

Particulars of Examination and Repairs (if any) Dam. & Perm. Rep.

(Periodical Surveys, when held, must be reported in detail and attention 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 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?

A. 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 Boilers?

To what pressure were they afterwards adjusted under steam?

Did the Surveyor examine the Safety Valves of Donkey Boilers?

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 datum 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?

COMPLETE

At the request of the Agents & Master I proceeded on board the above named vessel, while moored to a buoy in midstream off Caes do Sodré to survey & report on the damage sustained to this ship, while on her voyage to Sevilla with a cargo of coal & coke, she having fractured her thrust shaft on the 22nd inst., south of Cape Finisterre and was able under easy steaming to reach Lisbon, at which Port she arrived on the 25th September, all as reported by Captain.

(For further particulars see Log-Book)

On descending into engine room I found thrust shaft broken aft of forward collar and to enable the vessel to proceed, recommended the following permanent repairs to be effected at this Port:

Broken shaft to be taken adrift & sent on shore along with cast iron thrust block, shoes etc., & a new thrust shaft to be made & fitted with spigot at either end (as first tunnel bearing is a considerable distance from after main bearing of engines & no bearings exist on fore or after

General Observations, Opinion, and Recommendation: I am therefore of opinion that this

(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, D.M. 11, D.M. 12, D.M. 13, or L.M. 1, L.M. 2, L.M. 3, &c.)

vessel's machinery having been permanently repaired she be allowed to remain as now classed in the Reg. Book without fresh record of survey.

Survey Fee (per Section 70)

Fees applied for

4 00 15 27:10:0

Special Damage or Repair Fee (if any)

20 0 0

Travelling Expenses of chargeable

7 10 0

Received by me

27:10:0

Committee's Minute

FRI. 15 OCT. 1915

Assigned

FRI. APR. 26 1916



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Lloyd's Register Foundation

and of this thrust block) & thrust block trued up in lathe & shoes refitted. Crank shaft to be examined throughout & lifted to allow of examination of bottom half brasses of main bearings & the whole of this vessel's shafting lined up true throughout & any further damage that may be found, made good.

This done I again proceeded on board & found that crank shaft was down $1/32$ " at No.1 bearing so had bearings lined up trued & shaft rebbed. After end of crank shaft was recessed $1/2$ " deep by 3" in diameter to receive one of the spigot ends of the new thrust shaft & the same was done to fore end of first tunnel shaft for the same purpose but when a $3/4$ " hole was bored, for a guide, a flaw showed itself extending into the shaft or flange of shaft longitudinally about $1 1/2$ " deep, so the whole was continued & as the flaw extended hole was tapped & plugged to allow of the recess being made true; but as this shaft has stood the strain so many years, it was decided to take no further notice, the small hole seen in the centre of the shaft being immaterial. New thrust shaft was made out of an old piece of a crank shaft belonging to one of the Portuguese mail boats, the broken thrust shaft being only 4' long by $10 1/2$ " in diameter & the piece of crank being 15" in diameter with about a 28" flange at one end which allowed of all the old coupling holes being turned off flange remained $19 1/2$ " in diameter, the same as flange on crank shaft of this vessel's engine & the flange of the tunnel shaft being 15" diameter, this old shaft came in splendidly, after having 12" taken off in length & reduced to $10 1/2$ " for the collars & 8" at the smallest part. This done, shafting were coupled together & holes rimmed & parallel bolts fitted at either end after which the whole of the shafting was coupled together & engines tried under steam when I found that everything worked to my entire satisfaction & perfectly cool

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OF THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.