

# Report of Survey for Repairs of Engines and Boilers.

No. 15

No. in Reg. Book. Survey held at Amoy Date, first Survey 12<sup>th</sup> October Last Survey 9<sup>th</sup> November 1877

354 on the Iron S.S. "Rio Tejo" Master A. Favares

Tons 639 Owners Companhia Thetis Port belonging to Oporto Classified AI Years assigned. Character in Register Book.

Diameter of Cylinders 24 x 42 inches Engines made at Blackwall London When made 1872  
Length of Stroke 30 inches  
Pressure of Steam 60 lbs By whom made John Stewart  
Registered Horse Power 80

Particulars of Repairs and Examination the vessel being in dry dock, all connections with the sea were examined; unshipped the propeller, the propeller shaft and the stern tube; found the shaft defective and the lignum vitae much worn, lifted the crank shaft for examining the bearings, opened the cylinder covers, examined the pistons and both high and low pressure slide valves; found much play in the high pressure slide valve gear; opened the condenser and took all tubes out for examination and cleaning of the condenser; examined the feed pumps, the air pump and circulating pumps which were all found in good order. In examining the donkey pumps, found the big ones slide valve spindle worn out; the discharge pipe wanting to be renewed as well as the spindle of the discharge valve on the ships side; the valve itself leaky; for the small donkey a new shaft wanted; pistons and slide valves of both donkey were examined and found in order; all cocks and valves requiring overhauling.

Examined the main boilers, cut out 12 tubes; found in the crown of the 4 furnaces, the saddle plate defective; examined the shells and found them in good state excepting a place in the bottom of one of them; examined steam pipes which were found in a sufficient state; all feed cocks and valves were taken off for examination; examined the safety valves and found them wanting overhauling. Examined the donkey boiler and found all the tubes and 2 stays on the furnace crown defective.

Repairs done; viz: All sea cocks and sea valves were put in good order; lignum vitae in stern tube renewed and a new propeller shaft shipped and the propeller reshipped; all the crank shaft bearings were lined

The Amount of Fee ... £ 3 : 0 : received by me, Certificate (if required) ... £ : : 9<sup>th</sup> November 1877

(Travelling Expenses, if any, £ )

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

Committee's Minute 18



19647 Iron

lined up; a new packing ring fitted to the high pressure piston; the blocks in the segments of the slide motion fitted anew and new bushes placed where required the Condenser was properly cleaned and the tubes replaced in perfect state.

For the big donkey pump a new slide valve spindle, a new discharge pipe and a new spindle for the valve in the ship side was made; the valve has been put on the lathe and was grounded. The small donkey pump received a new shaft and all cocks and valves were put in good order.

In the main boilers renewed 122 tubes; all the 4 furnaces received new saddle plates and doubling plates were put underneath the fire bars; on the outside of the bottom of the shell of one of the boilers a doubling plate of 2 feet by 16 inches has been put on with cement and tap bolts all cocks and valves have been taken off and rejoined. the safety valves and their seats were turned anew and grounded.

All the tubes of the donkey boiler have been replaced by new ones; 2 stays on furnace crown were properly repaired and a doubling plate put underneath the fire bars.

Antwerp 9<sup>th</sup> November 1877

J. Demblon



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