

REPORT ON MACHINERY.

6251

No. 6251

Received at London Office MONDAY 1 OCTOBER 1883

No. in Survey held at Glasgow Date, first Survey May 2nd 1883 Last Survey Sept 8th 1883
 Reg. Book. " (Number of Visits 16 2464
 on the Screw Steamer "Amraputra" Tons 1619
 Master B. J. Barlow Built at Greenock By whom built Scott & Co When built 1874
 Engines made at Greenock By whom made Scott & Co when made 1874
 Boilers made at Dumbarton By whom made Denny & Co when made 1882 3
 Registered Horse Power 300 Owners British & Burmese Ind. Nav. Co. Ltd. Port belonging to Glasgow

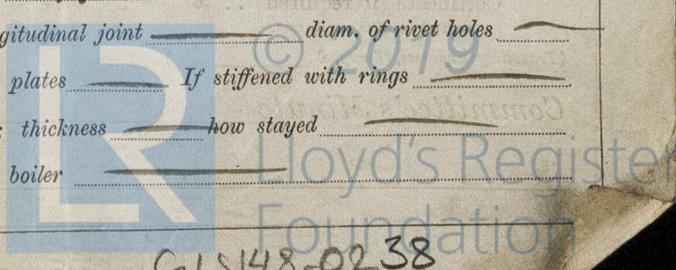
ENGINES, &c.—

Description of Engines
 Diameter of Cylinders 45 + 78" Length of Stroke 45" No. of Rev. per minute — Point of Cut off, High Pressure — Low Pressure —
 Diameter of Screw shaft 1-1/2" Diam. of Tunnel shaft 1-0 3/4" Diam. of Crank shaft journals 1-1/2" Diam. of Crank pin 1-1 1/2" size of Crank webs 9 x 13 1/4"
 Diameter of screw — Pitch of screw — No. of blades — state whether moveable — total surface —
 No. of Feed pumps Two diameter of ditto 5" Stroke 23" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two diameter of ditto 5" Stroke 23" Can one be overhauled while the other is at work Yes
 Where do they pump from Sea, Holdwell, Holds + Bilges.
 No. of Donkey Engines One hand Size of Pumps — Where do they pump from Same as Bilge pumps.
 Are all the bilge suction pipes fitted with roses — Are the roses always accessible — Are the sluices on Engine room bulkheads always accessible —
 No. of bilge injections One and sizes 6" Are they connected to condenser, or to circulating pump Circulating pump.
 How are the pumps worked By levers from cross head of each engine
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the discharge pipes above or below the deep water line —
 Are they each fitted with a discharge valve always accessible on the plating of the vessel Yes Are the blow off cocks fitted with a spigot and brass covering plate Yes
 What pipes are carried through the bunkers — How are they protected —
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes.
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges Yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock August 1st 1883
 Is the screw shaft tunnel watertight — and fitted with a sluice door — worked from —

BOILERS, &c.—

Number of Boilers Four Description Oval. Multitubular Whether Steel or Iron —
 Working Pressure 70 lbs Tested by hydraulic pressure to 140 lbs Date of test Dec 12th 1882
 Description of superheating apparatus or steam chest None
 Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately Yes
 No. of square feet of fire grate surface in each boiler 41.6 Description of safety valves Direct spring No. to each boiler Two
 Area of each valve 11 sq in Are they fitted with easing gear Yes No. of safety valves to superheater — area of each valve —
 Are they fitted with easing gear Yes Smallest distance between boilers and bunkers or woodwork 11" Diameter of boilers 9-6 x 15-2
 Length of boilers 9-8 1/4" description of riveting of shell long. seams Wedge-Lap circum. seams Double lap Thickness of shell plates 5/8 + 13/16"
 Diameter of rivet holes 1" whether punched or drilled Drilled pitch of rivets 4 1/2 x 2 1/4" Lap of plating 7 3/4"
 Percentage of strength of longitudinal joint 75.6 working pressure of shell by rules 74 lbs size of manholes in shell 13 x 17"
 Size of compensating rings Doubling plate 32 x 30. 5/8" thick No. of Furnaces in each boiler Two
 Outside diameter 3-5" length, top 6-3 1/2" bottom 8-10" thickness of plates 1/2" description of joint Butt if rings are fitted Yes
 Greatest length between rings 6-0" working pressure of furnace by the rules 95 lbs combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
 Pitch of stays to ditto, sides 9 x 7 1/2" back 8 x 8" top — If stays are fitted with nuts or riveted heads Nuts inside working pressure of plating by rules 75 lbs Diameter of stays at smallest part 1 1/4 x 1 3/8" working pressure of ditto by rules 91 lbs end plates in steam space, thickness 1/16"
 Pitch of stays to ditto 16 x 16" how stays are secured Nuts, rivet washers working pressure by rules 75 lbs diameter of stays at smallest part 2 3/8" working pressure by rules 100 lbs Front plates at bottom, thickness 3/4" Back plates, thickness 3/4"
 Greatest pitch of stays 14" working pressure by rules 70 lbs Diameter of tubes 3 1/2" pitch of tubes 4 3/4" thickness of tube plates, front 1/16" back 1/16" how stayed Tubes pitch of stays 17" width of water spaces 5"
 Diameter of Superheater or Steam chest — length — thickness of plates — description of longitudinal joint — diam. of rivet holes —
 Pitch of rivets — working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with rings —
 Distance between rings — working pressure by rules — end plates of superheater, or steam chest; thickness — how stayed —
 Superheater or steam chest; how connected to boiler —

Form No. 8-2006



GLS148-0238

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DONKEY BOILER— Description

Made at _____ by whom made _____ when made _____ where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ fire grate area _____ description of valves _____

No. of safety valves _____ area of each _____ if fitted with easing gear _____ if steam from main boiler enter the donkey boiler _____ diameter of donkey boiler _____ length _____ description of riveting _____

Thickness of shell plates _____ diameter of rivet holes _____ whether punched or drilled _____ pitch of rivets _____ lap of plating _____

per centage of strength of joint _____ thickness of crown plates _____ stayed by _____

Diameter of furnace, top _____ bottom _____ length of furnace _____ thickness of plates _____ description of joint _____

Thickness of furnace crown plates _____ stayed by _____ working pressure of shell by rules _____

Working pressure of furnace by rules _____ diameter of uptake _____ thickness of plates _____ thickness of water tubes _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,
Denny & Co. Manufacturers of new main boilers.

General Remarks (State quality of workmanship, opinions as to class, &c.)

These Boilers have been constructed under Special Sur at the works of Messrs Denny & Co in accordance with the Rules & require of the Society. They have now been satisfactorily fitted on board tested under steam to a working pressure of 70 lbs per sq ins. The Donkey Boiler has been examined over all parts & tested under steam to a working pressure of 40 lbs per sq ins. The Engines have been subjected to N^o 2 survey and there were exam the Cylinders, pistons, slide valves, air, circulating, feed & bilge cranshaft & shafting in tunnel, also bilge & steam pipes, condenser. The old flaw in left crank pin also the flaw in aft bearing Forward half of crank shaft do not appear to have undergone any alteration since last survey. The bilge valve box in the stokehold has been raised above the floor & attached to the bulk head whereby the valves are much more acc. than hitherto. The Feed & Bilge pumps have been fitted with new glands & bushes also new valves, while the plungers have been turned in the lathe. The tunnel shafting was found to be a what out of line (both when the vessel was afloat & in dry dock), is therefore been disconnected & the bearings raised to their correct. When the vessel was in dock the connections of sea cocks, valves, Propellers were all examined. These Engines & Boilers are now in good & safe working condition eligible in my opinion to be classed **L.M.C. + N.B. 9-83**

The amount of Entry Fee .. £ 3: 0: 0 received by me,
 Special .. £ 3: 3: 0
 Donkey Boiler Fee .. £ 0: 0: 0
 Certificate (if required) .. £ 0: 0: 0 28/9/1883
 To be sent as per margin.
 (Travelling Expenses, if any, £ _____)

It is submitted that this vessel is eligible to have the material classed L.M.C. + N.B. 9-83 from 1/10/83

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

Committee's Minute

+ N.B. L.M.C. 9-83

Glasgow
 Lloyd's Register
 Foundation