

REPORT ON MACHINERY.

No. 47053 (Received in London Office 9/3/07)
 No. in Survey held at London Date, first Survey July 3 Last Survey Feb. 26 1887.
 Reg. Book. 312 on the S. S. "John Pender" 22 visits Tons 706
 Master Smart Reithing Built at Smart Reithing When built 1875
 Engines made at Smart Reithing By whom made J. Scott & Sons when made 1875
 Boilers made at Blackwall By whom made Thames Iron Works when made 1886
 Registered Horse Power 98 Owners Eastern Telegraph Co. Port belonging to London

ENGINES, &c.—

Description of Engines
 Diameter of Cylinders _____ Length of Stroke _____ No. of Rev. per minute _____ Point of Cut off, High Pressure _____ Low Pressure _____
 Diameter of Screw shaft _____ Diameter of Tunnel shaft _____ Diameter of Crank shaft journals _____ Diameter of Crank pin _____ size of Crank webs _____
 Diameter of screw _____ Pitch of screw _____ No. of blades _____ state whether moveable _____ total surface _____
 No. of Feed pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 No. of Bilge pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 Where do they pump from _____
 No. of Donkey Engines _____ Size of Pumps _____ Where do they pump from _____
 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 _____ and sizes _____ Are they connected to condenser, or to circulating pump _____
 How are the pumps worked _____
 Are all connections with the sea direct on the skin of the ship _____ Are they Valves or Cocks _____
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ 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 _____ Are the blow off cocks fitted with a spigot and brass covering plate _____
 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 _____
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges _____
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock _____
 Is the screw shaft tunnel watertight _____ and fitted with a sluice door _____ worked from _____

BOILERS, &c.—

Number of Boilers Two Description Elliptical Multitubular
 Working Pressure 80 lbs. Tested by hydraulic pressure to 160 lbs. Date of test _____
 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 ✓
 No. of square feet of fire grate surface in each boiler 36 Description of safety valves Direct spring
 No. to each boiler 2 area of each valve 11.04 Are they fitted with easing gear yes
 No. of safety valves to superheater ✓ area of each valve ✓ are they fitted with easing gear ✓
 Smallest distance between boilers and bunkers or woodwork 2ft.
 Height of boilers 15.3' Length of boilers 9.3' description of riveting of shell long. seams double lap circum. seams single
 Thickness of shell plates 5/8" diameter of rivet holes 1" whether punched or drilled drilled pitch of rivets 3"
 Lap of plating 4" per centage of strength of longitudinal joint 60% working pressure of shell by rules 84 lbs.
 Size of manholes in shell 16" x 12" size of compensating rings ✓
 No. of Furnaces in each boiler Two outside diameter 3.3' length, top 6.3' bottom 9.6 3/8'
 Thickness of plates 3/8" description of joint Welded if rings are fitted no greatest length between rings ✓
 Working pressure of furnace by the rules 102 lbs.
 Combustion chamber plating, thickness, sides 15/32" back 7/16" top 1/2"
 Pitch of stays to ditto 8 7/8" sides 8" back 10" x 9 1/4"
 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 80 lbs.
 Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 113 lbs.
 End plates in steam space, thickness 11/16" pitch of stays to ditto 15" x 16" how stays are secured Nuts & large wash.
 Working pressure by rules 80 lbs. diameter of stays at smallest part 2 3/8" working pressure by rules 110 lbs.
 Front plates at bottom, thickness 5/8" Back plates, thickness 11/16" greatest pitch of stays 14" working pressure by rules 90 lbs.

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Diameter of tubes $3\frac{1}{4}$ pitch of tubes $4\frac{3}{8}$ thickness of tube plates, front $\frac{5}{8}$ back $\frac{3}{8}$
 How stayed pitch of stays width of water spaces
 Diameter of Superheater or Steam chest ☒ length ☒
 Thickness of plates description of longitudinal joint diameter 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 ☒

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 safety valves No. of safety valves area of each
 If fitted with easing gear If steam from main boilers can 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

The foregoing is a correct description,

Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. These boilers have been built)

under Special Survey - Materials & Workmanship good.
 Examined cylinders, slides, air, circulating, feed & bilge pumps
 & pumpg. argmts. & found in good condition. Crank, Thrust
 & tunnel shaft in good condition. Vessel placed in dry dock
 sea connections examined & found in good condition. Propeller
 disconnected, tail shaft examined, found to be much cor-
 roded between liners. A new tail shaft has been fitted to
 the old propeller & the stem bush renewed. A new donkey
 pump & new feed & bilge pump valves have been fitted.

The machinery being now in good & safe working condition
 renders the vessel eligible in my opinion to be marked in
 the Register Book with L.M.C. 2.87 & N.B. 37 recorded.

It is submitted that
 this vessel is eligible to
 have the notation
 L.M.C. 2.87 & N.B. 37
 recorded. 7/3/87

The amount of Entry Fee .. £ : : received by me,

Special £ 10:10 :

Certificate (if required) .. £ : 2:6

To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

FRIDAY 11 MARCH 1887

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+ L.M.C. 2.87 & N.B. 37

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



Lloyd's Register
Foundation