

REPORT ON MACHINERY.

Lon 47053

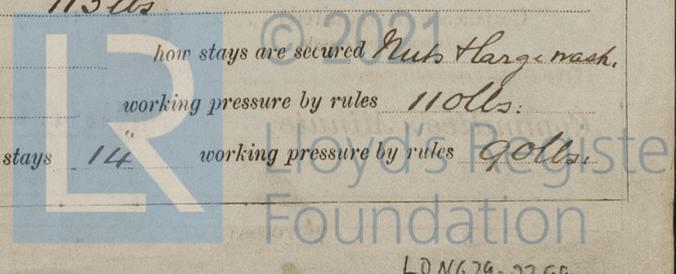
No. _____ (Received in London Office 9/3/07)
 No. in Survey held at London Date, first Survey July 3 Last Survey Feb. 26 1887
 Reg. Book. 312 on the S. S. "John Pender" 22 visits Tons 706
 Master _____ Built at Inverkeithing When built 1875
 Engines made at Inverkeithing By whom made J. Scott & Sons 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 15.3" Diameter 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 _____ top 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 1/2" 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 1/2" 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 $\frac{5}{8}$
 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 corroded 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 T.M.C. 2, 87 & N.B. 37 recorded.

It is submitted that this vessel is eligible to have the notice entered in MB 2, 87 & N.B. 37 recorded
 W.R. 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. 1st Apr 1887

Committee's Minute FRIDAY, 11 MARCH, 1887
 + MB 2, 87

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

