

# REPORT ON MACHINERY.

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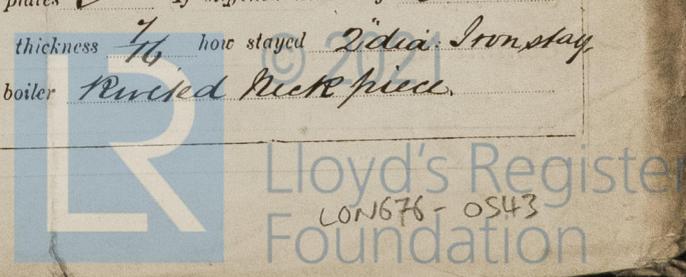
No. 274 on the S. S. "Phone" Received at London Office 13  
 No. in Survey held at London Date, first Survey June 19 Last Survey Feb. 17 1886  
 Reg. Book. 274 (Number of Visits 14) Tons           
 Master W. P. Ho. Built at Sunderland By whom built W. P. Ho. When built 1868  
 Engines made at Millwall By whom made Mellish & Co. Wks. when made 1871  
 Boilers made at Blackwall By whom made J. Stewart & Son when made 1885  
 Registered Horse Power          Owners          Port belonging to London

**ENGINES, &c.—**

Description of Engines           
 Diameter of Cylinders 59" & 54" Length of Stroke          No. of Rev. per minute          Point of Cut off, High Pressure          Low Pressure           
 Diameter of Screw shaft          Diam. of Tunnel shaft          Diam. of Crank shaft journals          Diam. 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 Large 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 Multitubular Whether Steel or Iron Steel  
 Working Pressure 70 lbs. Tested by hydraulic pressure to 140 lbs. Date of test Nov. 5<sup>th</sup> 1885  
 Description of superheating apparatus or steam chest Steam dome partly in funnel  
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no  
 No. of square feet of fire grate surface in each boiler 40 sqft. Description of safety valves Direct spring No. to each boiler 2  
 Area of each valve 9.62 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. Diameter of boilers 11.6"  
 Length of boilers 10.6" description of riveting of shell long. seams double lap circum. seams single lap Thickness of shell plates 21"  
 Diameter of rivet holes 15/16" whether punched or drilled drilled pitch of rivets 2 3/4" Lap of plating 4 3/4"  
 Per centage of strength of longitudinal joint 65 working pressure of shell by rules 70 lbs. size of manholes in shell 16 x 12"  
 Size of compensating rings 3 1/2 x 3 1/2 x 9/16 Angle Iron. No. of Furnaces in each boiler 3  
 Outside diameter 2.10" length, top 7" bottom 9.7" thickness of plates 7/16" description of joint lap if rings are fitted no  
 Greatest length between rings          working pressure of furnace by the rules 72 lbs. combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"  
 Pitch of stays to ditto, sides 9 1/2" back 8 1/2" top          If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 85 lbs. Diameter of stays at smallest part 1 1/2" working pressure of ditto by rules 117 lbs. end plates in steam space, thickness 1/16"  
 Pitch of stays to ditto 16 1/4" how stays are secured double nut & nuts working pressure by rules 160 lbs. diameter of stays at smallest part 2" Iron working pressure by rules 75 lbs. Front plates at bottom, thickness 5/8" Back plates, thickness 5/8"  
 Greatest pitch of stays 12" working pressure by rules 74 lbs. Diameter of tubes 3 1/4" pitch of tubes 4 1/4" thickness of tube plates, front 5/8" back 5/8" how stayed by tubes          pitch of stays 12 3/4" width of water spaces 9"  
 Diameter of Superheater or Steam chest 3.6" length 7" thickness of plates 3/8" description of longitudinal joint single lap diam. of rivet holes 13"  
 Pitch of rivets 2" working pressure of shell by rules 107 lbs. 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 7/16" how stayed 2 dia. Iron stay  
 Superheater or steam chest; how connected to boiler Riveted with piece



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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,  
Manufacturer.

**General Remarks** (State quality of workmanship, opinions as to class, &c. Two new Steel Boilers have been fitted, materials & workmanship good. Safety valves set to the working pressure of 70 lbs. under steam. — A new High Pressure cylinder 29" dia. has been fitted in lieu of 30" as before, a new piston & slide valve also fitted. Vessel placed in dry dock, all the sea cocks at bottom of vessel have been fitted on turn of bilge. Propeller & its connections found in good condition. Stern bush worn. Examined Low pressure cylinder, piston & slide & found same in good condition. Grand Thrust & Tunnel sh. in good condition. Examined Air circulating Fan & Bilge pumps & valves all in good condition.

The machinery being now in good & safe working condition renders the vessel eligible in my opinion to be marked in the Register Book with **N.B. T.M.C. 2.86.**

*Submitted that this vessel is eligible to have N.B. 2-86 in the Register Book.*  
L.M.C. 2-86  
25-2-86

The amount of Entry Fee .. £ : : received by me,  
Special .. 2/3/86. £ 3 : 3 :  
main Donkey Boiler Fee .. £ 6 : 6 :  
Certificate (if required) .. £ : 5 : 6<sup>th</sup> March 1886

*Geo. C. Wilmison*  
Engineer Surveyor to Lloyd's Register of British & Foreign Ships

Committee's Minute **TUESDAY 2 MARCH 1886**  
+ JVB 86 M.C. 86

