

# REPORT ON MACHINERY.

346

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No. in Survey held at Belfast Date, first Survey \_\_\_\_\_ Last Survey \_\_\_\_\_ 18  
 Reg. Book. \_\_\_\_\_ (Number of Visits \_\_\_\_\_)  
 590 on the Auxiliary boiler S.S. "Bostonian" Tons \_\_\_\_\_  
 Master \_\_\_\_\_ Built at Belfast By whom built Harland & Wolff When built 1888  
 Engines made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_  
 Boilers made at Belfast By whom made Harland & Wolff when made 1888  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

## 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 \_\_\_\_\_ 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 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 \_\_\_\_\_  
 That 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 \_\_\_\_\_  
 the screw shaft tunnel watertight \_\_\_\_\_ and fitted with a sluice door \_\_\_\_\_ worked from \_\_\_\_\_

## BOILERS, &c.—

Number of Boilers One Description Single End. Mult. Circular whether Steel or Iron Steel  
 Working Pressure 90 lbs. Tested by hydraulic pressure to 180 lbs. Date of test 18th. May 1888.  
 Description of superheating apparatus or steam chest \_\_\_\_\_  
 Can each boiler be worked separately  Can the superheater be shut off and the boiler worked separately   
 Area of square feet of fire grate surface in each boiler 22 Description of safety valves Cockburn's Sp. No. to each boiler two  
 Area of each valve 5.94 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  Smallest distance between boilers and bunkers or woodwork \_\_\_\_\_ Diameter of boilers 10'-0"  
 Length of boilers 8'-6" description of riveting of shell long. seams Lap & treble Riv. circum. seams Lap & double Riv. thickness of shell plates 5/8"  
 Diameter of rivet holes 1" + 1/16" whether punched or drilled drilled pitch of rivets 4.18" Lap of plating 4/4"  
 Percentage of strength of longitudinal joint 75 working pressure of shell by rules 89.7 size of manholes in shell 16" x 12"  
 No. of compensating rings 27" x 24" x 5/8" rectangular steel plate No. of Furnaces in each boiler two  
 Inside diameter 33 3/8" length, top 5'-7" bottom 7'-9" thickness of plates 3/16" description of joint Lap & 4 bolts 3 x 3 1/2" A under loc.  
 Greatest length between rings  working pressure of furnace by the rules 107 lbs. combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"  
 Distance of stays to ditto, sides 9 x 9 back 8 1/2 x 8 1/2 top 9 x 9 1/2 stays are fitted with nuts or riveted heads Nutted working pressure of plating by rules 90 lbs.  
 Diameter of stays at smallest part 1 1/2" iron working pressure of ditto by rules 107 lbs. and plates in steam space, thickness 1/16"  
 Distance of stays to ditto 17 x 16 how stays are secured double nuts and washers working pressure by rules 100 lbs. diameter of stays at smallest part 2 1/2" iron  
 Working pressure by rules 108 lbs. Front plates at bottom, thickness 1/16" Back plates, thickness 5/8"  
 Greatest pitch of stays 9 x 8 3/4" working pressure by rules 148 lbs. Diameter of tubes 3" ginc. pitch of tubes 4 1/4" x 4 1/4" thickness of tube plates, front 1/4" back 23" how stayed Screw stayed  
 Diameter of Superheater or Steam chest 32 length 32 thickness of plates 1/4" description of longitudinal joint \_\_\_\_\_ diam. of rivet holes 7/8"  
 Distance 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 \_\_\_\_\_

Harland & Wolff  
 James Maxton  
 BELSS-0024

**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 safe  
 valves \_\_\_\_\_ No. of safety valves \_\_\_\_\_ area of each \_\_\_\_\_ if fitted with easing gear \_\_\_\_\_ if steam from main boilers e  
 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.

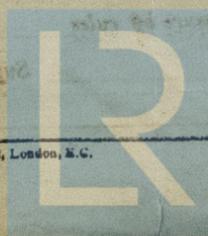
**General Remarks** (State quality of workmanship, opinions as to class, &c.)

The amount of Entry Fee .. £	:	:	received by me,
Special .. .. . £	:	:	}
Donkey Boiler Fee .. . £	:	:	
Certificate (if required) .. £	:	:	

(Travelling Expenses, if any, £ \_\_\_\_\_)

Committee's Minute

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



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