

# REPORT ON MACHINERY.

346

No. 3464

No. in Survey held at *Belfast* Date, first Survey \_\_\_\_\_ Last Survey \_\_\_\_\_ 18  
 Reg. Book. \_\_\_\_\_  
 590 on the *Auxiliary boiler S.S. "Bostonian"* (Number of Visits \_\_\_\_\_) 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. Mals. 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 & double Riv.* stays are fitted *one*  
 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"*  
 No. of stays to ditto, sides *9 x 9* back *8 1/2" x 8 1/2"* top *9 x 9* 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"*  
 No. of stays to ditto *17 x 16* how stays are secured *double nuts and washers fixed to plate* 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" galv.* pitch of tubes *4 1/4" x 4 1/4"* thickness of tube plates, front *4/16"* back *23"* how stayed *Screw stayed* stays *8 1/2" x 8 1/2"* width of water spaces *1 1/2" bet tubes*  
 Diameter of Superheater or Steam chest ☒ length ☒ thickness of plates ☒ description of longitudinal joint ☒ diam. of rivet holes ☒  
 No. 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*

BEISS-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 \_\_\_\_\_  
 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.

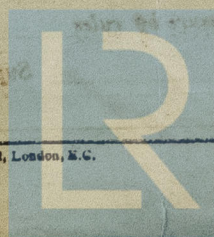
## General Remarks (State quality of workmanship, opinions as to class, &c.)

The amount of Entry Fee .. £ : : received by me,  
 Special .. .. £ : :  
 Donkey Boiler Fee .. .. £ : :  
 Certificate (if required) .. £ : : 18

To be sent as per margin.  
 (Travelling Expenses, if any, £ )

Committee's Minute

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



© 2019

Lloyd's Register  
Foundation