

REPORT ON MACHINERY.

3506

No. 3506 Port of Belfast Received at London Office MON 3 DEC 1888
 No. in Survey held at Belfast Date, first Survey 15th Aug. Last Survey 23rd Nov. 1888
 Reg. Book. 317 on the Iron Screw Steamer Shursby (Number of Visits 12) Tons 316
494
441
 Master J. M. Carthy Built at Belfast By whom built Harland & Wolff When built 1876
 Engines made at Belfast By whom made J. Rowan & Co. Lim. when made 1876
 Boilers made at Belfast By whom made Harland & Wolff (Lim^d) when made 1888
 Registered Horse Power 71 Owners Col. S. J. H. Shursby BA Port belonging to Flutwood

ENGINES, &c.—

Description of Engines Compound Inverted direct acting Surface Cond^r.
 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 _____
 Diameter of Feed pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 Diameter of Bilge pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 Where do they pump from _____
 Diameter 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 _____
 Are the bilge injections _____ and sizes _____ Are they connected to condenser, or to circulating pump _____
 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 _____
 Are the pipes 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 One Description Circul. Sing. End. Mult. whether Steel or Iron Steel
 Working Pressure 70 lbs Tested by hydraulic pressure to 140 lbs Date of test 3rd November 1888
 Description of superheating apparatus or steam chest None
 Can each boiler be worked separately Can the superheater be shut off and the boiler worked separately
 No. of square feet of fire grate surface in each boiler 49.5 Description of safety valves Spring No. to each boiler 2
 Area of each valve 12.56 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 14" Diameter of boilers 13'-6"
 Length of boilers 9'-5" description of riveting of shell long. seams 10 Riv. 10 B.S. circum. seams Lap 10 R. Thickness of shell plates 1/4"
 Diameter of rivet holes 7/8" whether punched or drilled drilled pitch of rivets 3.62" Lap of plating 9" x 1/2 B.S.
 Percentage of strength of longitudinal joint 75.8 plate working pressure of shell by rules 72 lbs size of manholes in shell 16" x 12"
71.7 rivet
 Size of compensating rings Reck. plate 24" x 28" x 1/4" Steel No. of Furnaces in each boiler Three
 Outside diameter 38" length, top 6'-6" bottom 8'-6" thickness of plates 1/2" description of joint double strap if rings are fitted no
 Greatest length between rings _____ working pressure of furnace by the rules 70 lbs combustion chamber plating, thickness, sides 15/32" back 15/32" top 17/32"
 Pitch of stays to ditto, sides 9" back 7 1/2" to 9" top 8" to 10 1/2" If stays are fitted with nuts or riveted heads nuttid working pressure of plating by rules 78 to 83 lbs
 Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 71 lbs end plates in steam space, thickness 7/8"
 Pitch of stays to ditto 18" x 19" how stays are secured ble nuts & washers working pressure by rules 46 lbs. diameter of stays at smallest part 2 1/4" working pressure by rules 74 lbs. Front plates at bottom, thickness 5/8" Back plates, thickness 5/8"
 Greatest pitch of stays 12" working pressure by rules 83 lbs. Diameter of tubes 3 1/4" pitch of tubes 4 1/2" x 4 1/2" thickness of tube _____
 plates, front 5/8" back 5/8" how stayed solid stays pitch of stays 9" x 12 1/2" width of water spaces 9 1/2" back of brace
 Diameter of Superheater or Steam chest length _____ thickness of plates _____ description of longitudinal joint _____ diam. 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 _____

Lloyd's Register Foundation

BEL55-0154

DONKEY BOILER— Description *Vertical & Cylindrical, Iron*
 Made at *Bradford* by whom made *Partington & Co* when made *1888* where fixed *In Stork*
 Working pressure *70 lbs* tested by hydraulic pressure to *140* No. of Certificate *720* fire grate area *11 sq ft* description
 valves *Down* No. of safety valves *one* area of each *70 in* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *4'-9"* length *10'-2"* description of riveting *lap joints*
 Thickness of shell plates *3/8"* diameter of rivet holes *3/4"* whether punched or drilled *drilled* pitch of rivets *2 1/2"* lap of plating *4"*
 per centage of strength of joint *70* thickness of crown plates *7/16"* stayed by *six stays 1 1/2" dia.*
 Diameter of furnace, top *3'-8"* bottom *3'-9"* length of furnace *4'-8"* thickness of plates *1/2"* description of joint *lap & single piece*
 Thickness of furnace crown plates *1/2"* stayed by *same as above* working pressure of shell by rules *70 lbs.*
 Working pressure of furnace by rules *80 lbs.* diameter of uptake *19"* thickness of plates *3/8"* thickness of water tubes *3/8" x 9" dia*

SPARE GEAR. State the articles supplied:— *The above particulars except those underlined were taken from slip sent from Liverpool and attached to this report.*

The foregoing is a correct description,
Richard M. Lloyd Manufacturer of Main Boiler.

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

The Main Boiler of the foregoing Steamer has been constructed and placed on board, in accordance with the approved plan, the Secretary's letter, dated, 5th July, 1888; the Rules of the Society and to the satisfaction of the undersigned.

The steel used was tested in accordance with the Rules and the material & workmanship throughout were good & satisfactory. When finished the boiler was tested under hydraulic and steam pressures, giving satisfaction; the safety valves were adjusted to blow off under steam at 70 + 5 lbs. on main & 65 lbs. on donkey boiler.

A new main steam pipe that was supplied & fitted was tested under hyd. pressure to 140 lbs.

In addition to above, the propeller was taken off, shaft and universal joint with lowering gear overhauled and put in an efficient condition, and all sea connections & fastenings examined.

The above New Main & Donkey boilers having been constructed and put on board in accordance with the Rules, I would respectfully recommend that the notification **N.B. 88** be recorded in the Register Book.

No other parts of Machinery were opened out in this port.

It is submitted that this vessel is eligible to have + N.B. 88 recorded.

The amount of Entry Fee .. £ : : received by me.
 Special .. £ 4 : 4 : 0
 Donkey Boiler Fee .. £ : :
 Certificate (if required) .. £ : :
To be sent as per margin.

James Maston
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 3.12.88

Committee's Minute **TUES 4 DEC 1888**

+ N.B. 88

