

REPORT ON MACHINERY.

3872

No. 3872

No. in Survey held at Reg. Book.

Port of Glasgow

Glasgow

Date, first Survey 2nd Sept 1890 Last Survey 28 Jan 28 91

Received at London WED. 25 MAR 1891

on the

S.S. Green

Tons

Master

Built at Belfast

By whom built Workman & Clark

When built 1891

Engines made at

Glasgow

By whom made

Muir & Houston

when made 1891

Boilers made at

Do.

By whom made

Do.

when made 1891

Registered Horse Power

Per Rule 95

Owners

Port belonging to

ENGINES, &c.—

Description of Engines Inverted Direct Acting Triple Expansion No. of Cylinders Three

Diam. of Cylinders 16, 26, 42 Length of Stroke 30 Rev. per minute 80640 Point of Cut off, High Pressure 5/8 Low Pressure 9/16

Diameter of Screw shaft 8 Diam. of Tunnel shaft 7 3/4 Diam. of Crank shaft journals 8 Diam. of Crank pin 8 size of Crank webs 5 1/4 x 11

Diameter of screw Could not be ascertained Pitch of screw — No. of blades Four state whether moveable Yes total surface Yes

No. of Feed pumps Two diameter of ditto 3 Stroke 15 Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two diameter of ditto 3 Stroke 15 Can one be overhauled while the other is at work Yes

Where do they pump from Engine Room, also Holds + Tunnel

No. of Donkey Engines Two Size of Pump Feed 6 1/2 x 4 pump x 6 inches where do they pump from Feed donkey from all compartments Ballast engine from all compartments Feed donkey one separate suction from bilge

Are all the bilge suction pipes fitted with roses Yes Are the roses always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes

No. of bilge injections One and sizes 3 dia. Are they connected to condenser, or to circulating pump Circulating

How are the pumps worked By levers from crosshead

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the discharge pipes above or below the deep water line Above

Are they each fitted with a discharge valve always accessible on the plating of the vessel Yes Are the blow off cocks fitted with a spigot and brass covering plate Yes

What pipes are carried through the bunkers None How are they protected Yes

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges Yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launching See Belfast Report

Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Engine room platform

Are the rivets in the shell of the boiler worked from Engine room platform

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BOILERS, &c.—

No. of Boilers One Description Cylindrical - Mult Material Steel Letter for record S

Working Pressure 160 lb. Tested by hydraulic pressure to 320 lb. Date of test November 24th 1890

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 Yes

Area of square feet of fire grate surface in each boiler 56 Description of safety valves Direct spring No. to each boiler Two

Area of each valve 7 sq. ins. Are they fitted with easing gear Yes No. of safety valves to superheater 1 area of each valve 7

Are they fitted with easing gear Yes Smallest distance between boilers and bunkers or woodwork 3 ft. Diameter of boilers 13-6

Length of boilers 10-0 description of riveting of shell long. seams Butt. Three rows circum. seams Lap. double Thickness of shell plates 1 3/32

Diameter of rivet holes 1 1/4 whether punched or drilled Drilled pitch of rivets 7 3/4 x 3 3/8 Lap of plating 18 1/2 butt strap

Percentage of strength of longitudinal joint 84.3 working pressure of shell by rules 164 lb. size of manholes in shell 16 x 11

No. of compensating rings None No. of Furnaces in each boiler Three Description of Furnaces Plain

Outside diameter 42 length 6-6 tubes thickness of plates 3/4 description of joint Butt. if rings are fitted No

Greatest length between rings working pressure of furnace by the rules 157 lb. combustion chamber plating, thickness, sides 9/16 back 9/16 top 9/16

Pitch of stays to ditto, sides 7 3/4 x 7 3/4 back 7 3/4 x 7 3/4 top 7 1/2 x 7 3/4 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 162 lb. Diameter of stays at smallest part 1 3/8 inches working pressure of ditto by rules 165 lb. end plates in steam space, thickness 1

Pitch of stays to ditto 15 x 15 how stays are secured Nuts working pressure by rules 160 lb diameter of stays at smallest part 2 1/2 inches working pressure by rules 160 lb. Front plates at bottom, thickness 13/16 Back plates, thickness 13/16

Greatest pitch of stays working pressure by rules Diameter of tubes 3 1/2 pitch of tubes 14 1/2 x 4 1/2 thickness of tube plates, front 13/16 back 13/16 how stayed Tubes pitch of stays 14 1/2 x 9 1/2 width of water spaces 5 1/2

Diameter of Superheater or Steam chest None length thickness of plates description of longitudinal joint diam. of rivet holes

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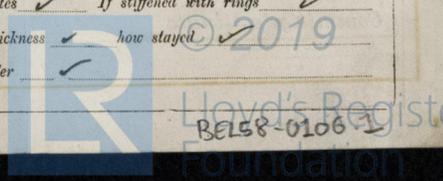
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Lloyd's Register BELSH-0106

Report of Survey for Repairs, &c., of Engines & Boilers.

DONKEY BOILER— Description *Vertical Three cross tubes.*
 Made at *Glasgow* by whom made *Muir & Houston.* when made *1891.* where fixed *In Stokelhold.*
 Working pressure *60 lbs.* tested by hydraulic pressure to *120 lbs.* No. of Certificate *2754* fire grate area *16 sq ft.* description of safety valves *Direct spring.*
 No. of safety valves *two* area of each *3.4 sq ft.* if fitted with easing gear *yes* if steam from main boilers can enter the donkey boiler *No.* diameter of donkey boiler *5-0"* length *10-6"* description of riveting *Lap-double.*
 Thickness of shell plates *3/8"* diameter of rivet holes *15/16"* whether punched or drilled *Drilled* pitch of rivets *3 1/2"* lap of plating *5"*
 per centage of strength of joint *73* thickness of crown plates *5/8"* stayed by *Six stays 1 3/4 dia.*
 Diameter of furnace, top *3-8"* bottom *4-6"* length of furnace *4-9"* thickness of plates *1 1/16"* description of joint *Lap.*
 Thickness of furnace crown plates *1/2"* stayed by *Plate drilled & six stays.* working pressure of shell by rules *90 lbs.*
 Working pressure of furnace by rules *65 lbs.* diameter of uptake *11"* thickness of plates *3/8"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *Connecting rod top & bottom end bolts & nuts. One set of coupling bolts. Two main bearing bolts. Feed & bilge pump valves. Assorted bolts, nuts &c. also three main boiler tubes. Six condenser tubes. One set of air pump valves. One propeller.*
 The foregoing is a correct description,
Muir & Houston Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.)
These engines & boilers have been constructed under special survey. They are of good material & workmanship. They have been well fitted on board - satisfactorily tested under steam and I am of opinion they are eligible to be classed + L.M.C. 1-91 in the Register Book.

Appended hereto is the approved tracing of main boiler also two reports on forgings.

This is submitted that this vessel is eligible to have + L.M.C. 2-91 recorded. W.A. 25-3-91

COOK

The amount of Entry Fee .. £ 1 : - : - received by me.
 Special .. £ 14 : 5 : -
 Donkey Boiler Fee .. £ : : :
 Certificate (if required) .. £ : : :
 (Travelling Expenses, if any, £)
 Committee's Minute
 THURS. 26 MAR 1891
 + L.M.C. 2, 91
 Walter Robson.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

No. *3878* Date of Writing Report *2nd July 1891* Port of *Belfast*
 Reg. Book. Survey held at *Belfast* Date, first Survey *1st Dec 1890* Last Survey *19th Dec 1890*
 on the Machinery of the *ss. Eveleen* Master *W. H. Clark* No. of Visits *7*
 Gross *1000* Net *800* Vessel built at *Belfast* By whom *W. H. Clark* When *18*
 Registered *1* Engines made at *Glasgow* When *1891* Boilers, when made (Main) *(Donkey)*
 No. of Main Boilers *1* Owners *John Milligen* Port *Belfast* Voyage *Construction*
 Team Pressure *100 lbs.* If Surveyed Afloat or in Dry Dock *Specially during Construction* Class of Vessel & Machinery *100A1*
 in Donkey Boiler *(State name of Dock.)* (As in Register Book, including dates of contemplated Special Surveys of Ship and of last Boiler Survey.)

Particulars of Examination and Repairs (if any)
 (State clearly the cause of Repairs if any, and, in detail, the nature and extent of Examinations and subsequent Repairs.) Repairs on account of Damage should be separated from repairs due to other causes. State also the dates and initials of any letters respecting this case.
 Did the Surveyor personally go inside each Boiler separately (including the Donkey Boiler, if any), and make a thorough examination at this time?
 This was not done, state for what reasons?
 And what parts of the Boilers could not be thus thoroughly examined?
 What special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each boiler?

This is to certify that the sea cocks and valves, the discharge valves, the stem tube, propeller shaft & propeller have been fitted in this vessel in accordance with the Rules and to the satisfaction of the undersigned.

General Observations, Opinion, and Recommendation:—
 (State clearly what alteration, if any, is suggested to be made in the existing classification and notification of the vessel's machinery in the Register Book, consequent upon this survey: thus, for example, B.S. 1/89, B. & M.S. 1/89, or L.M.C. 1/89, as the case may be.)

This report is respectfully submitted for the Committee's information when dealing with the classification of this Steamer.

Registration Fee (per Sec. 27) .. £ : : :	Fees applied for
Survey Fee (per Section 28) .. £ : : :	18
Local Damage Fee (per Section 28) .. £ : : :	18
Certificate (if required) as per margin .. £ : : :	Received by me,
Selling Expenses (if chargeable) .. £ : : :	18

Jamesellaaton
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute
 THURS. 26 MAR 1891
 TUE. 10 OCT. 1916

