

REPORT ON MACHINERY.

Copy 909
 No. 6317
 Port of Glasgow
 Date, first Survey 1st May
 Last Survey Nov 13th 1883
 Reg. Book. No. in Survey held at
 on the Screw Steamer "Enterpe"
 Master J. L. Tonkin Built at Glasgow By whom built A. Stephen & Sons
 Engines made at Glasgow By whom made A. Stephen & Sons when made 1883
 Boilers made at Glasgow By whom made A. Stephen & Sons when made 1883
 Registered Horse Power 180 Owners The Enterpe Steam Ship Co. Ltd. Port belonging to Cardiff

ENGINES, &c.—

Description of Engines Inverted Direct Acting - Compound Surface Condensing No. of Cylinders 2
 Diam. of Cylinders 32" x 60" Length of Stroke 39" Rev. per minute 55 Point of Cut off, High Pressure 20" Low Pressure 20"
 Diameter of Screw shaft 10 1/2" Diam. of Tunnel shaft 10" Diam. of Crank shaft journals 10 1/2" Diam. of Crank pin 11" size of Crank webs 12 1/4" x 7"
 Diameter of screw 14" x 6" Pitch of screw 17" x 11" No. of blades 4 state whether moveable loose total surface 44 1/4 sq ft
 No. of Feed pumps 2 diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 Where do they pump from Bilges Holds & Tanks
 No. of Donkey Engines Two hand Size of Pumps Donkey 8" x 24" x 8" Where do they pump from Bilges Holds & Tanks
 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 1/2" Are they connected to condenser, or to circulating pump Circulating
 How are the pumps worked By levers from crosshead of both engines.
 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 —
 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 Before Launching
 Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Engine room at Luck.

BOILERS, &c.—


No. of Boilers Two Description Cylindrical - Multitubular Material "Iron Shell" Letter (for record)
 Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test Oct 20th 1883.
 Description of ~~boiler~~ steam chest Horizontal
 Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately —
 No. of square feet of fire grate surface in each boiler 36 1/2 sq ft Description of safety valves direct spring No. to each boiler Two
 Area of each valve 15.9 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 9" Diameter of boilers 12" x 6"
 Length of boilers 11' - 0" description of riveting of shell long. seams & weld circum. seams Lap - double Thickness of shell plates 1"
 Diameter of rivet holes 1 3/16" whether punched or drilled drilled pitch of rivets 4 1/8" Lap of plating 1 1/2" butt
 Per centage of strength of longitudinal joint weld 70 working pressure of shell by rules 90 lbs size of manholes in shell 15" x 11 1/2"
 Size of compensating rings 4 1/2" x 7 1/8" No. of Furnaces in each boiler Two Description of Furnaces
 Outside diameter 4' - 0" length 7' - 6" thickness of plates 1 1/8" description of joint weld if rings are fitted Yes
 Greatest length between rings 10' - 3" working pressure of furnace by the rules 100 lbs combustion chamber plating, thickness, sides 7/16" back 7/16" top 7/16"
 Pitch of stays to ditto, sides 8" back 13/4" top — If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 84 lbs
 Diameter of stays at smallest part 1 3/8" screw working pressure of ditto by rules 118 lbs end plates in steam space, thickness 1/8"
 Pitch of stays to ditto 1' - 5" x 1' - 4 1/2" how stays are secured Nuts working pressure by rules 95 lbs diameter of stays at smallest part 2 1/2" working pressure by rules 105 lbs Front plates at bottom, thickness 1/8" Back plates, thickness 7/8"
 Greatest pitch of stays 15" nearly working pressure by rules 80 lbs Diameter of tubes 3 1/2" pitch of tubes 4 3/4" x 4 5/8" thickness of tube plates, front 1/8" back 1/16" how stayed tubes pitch of stays 15" x 9 1/4" width of water spaces 5"
 Diameter of Superheater or Steam chest 3' - 0" length 11' - 0" thickness of plates 7/16" description of longitudinal joint Lap diam. of rivet holes 1 3/16"
 Pitch of rivets 2 1/2" working pressure of shell by rules 115 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 1/2" how stayed one stay 1 1/2" dia
 Superheater or steam chest; how connected to boiler two tubes 15" dia 7/8" thick

DONKEY BOILER— Description *Vertical - with three cross tubes*
 Made at *Glasgow* by whom made *Alex^r Stephen & Sons* when made *1883* where fixed *In stock hold*
 Working pressure *50 lbs* tested by hydraulic pressure to *100 lbs* No. of Certificate *1198* fire grate area *23 1/4 sq ft* description of safety
 valves *direct springs* No. of safety valves *2* area of each *7 1/2 ins* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *6' 6"* length *10' 6"* description of riveting *Lap double*
 Thickness of shell plates *7/16"* diameter of rivet holes *13/16"* whether punched or drilled *punch* pitch of rivets *2 1/2"* lap of plating *4"*
 per centage of strength of joint *67.2* thickness of crown plates *2"* stayed by *8 stays 1 1/2" dia*
 Diameter of furnace, top *5' 5"* bottom *5' 10"* length of furnace *5' 5"* thickness of plates *7/16"* description of joint *Lap-Single*
 Thickness of furnace crown plates *7/16"* stayed by *As above & uptake* working pressure of shell by rules *60 lbs*
 Working pressure of furnace by rules *50 lbs* diameter of uptake *15"* thickness of plates *7/16"* thickness of water tubes *3/8"*
 SPARE GEAR. State the articles supplied:— *Top & bottom end connecting rod bolts & nuts,*
Two main bearing bolts, set of coupling bolts, feed & bilge pump valves
Bolts & nuts assorted. Iron of various sizes:

The foregoing is a correct description,

(Sgd) *Alex^r Stephen & Sons.* 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 & I am of opinion they are eligible to be classed  Lloyd's M.C. 11.83 in the Register Book.

The approved plan of boiler, also reports on steel tests & forgings are herewith enclosed.

Certificate (if required) to be sent to

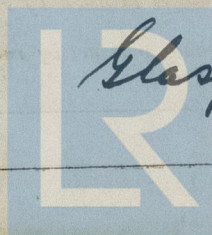
The amount of Entry Fee .. £ : : received by me,
 Special £ : :
 Donkey Boiler Fee £ : :

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(Travelling Expenses, if any, £)

Committee's Minute

(Sgd) *Walter C. Robson*
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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