

REPORT ON MACHINERY.

10543

No. 10543

Port of *Glasgow*

Received at London Office *11 FEB. 28 MAY 1891*

No. in Survey held at *Glasgow*

Date, first Survey *6th Nov 1890* Last Survey *25th February 1891*

Reg. Book

83. on the

S. S. Paradox

(Number of Visits *15*)

Gross *358*

Net *226*

Master *not fixed* Built at *Glasgow* By whom built *H. Simons & Co* When built *1854*

Engines made at *Hull* By whom made *Gilbert Cooper* when made *1874*

Boilers made at *Glasgow* By whom made *L. Burnett & Co* when made *1891*

Registered Horse Power *65* Owners *A. H. Taylor* Port belonging to *Aberdeen*

ENGINES, &c.—

Description of Engines _____ No. of Cylinders _____
 I am. of Cylinders _____ Length of Stroke _____ 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 _____

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 _____
 Are the pipes carried through the bunks _____ 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.—

No. of Boilers *One* Description *Multitubular* Material *Steel* Letter (for record) *S.*
 Working Pressure *70 lbs* Tested by hydraulic pressure to *140 lbs* Date of test *21st February 1891*
 Position of superheating apparatus or steam chest *Vertical dome*
 Can the boiler be worked separately _____ Can the superheater be shut off and the boiler worked separately _____
 Square feet of fire grate surface in each boiler *29.25* Description of safety valves *Spring* No. to each boiler *two*
 Diameter of each valve *7.59"* 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 bunks or woodwork *8"* Diameter of boilers *10'-0"*
 Length of boilers *10'-0"* description of riveting of shell long. seams *tub. riv. lap* circum. seams *dr. riv. lap* Thickness of shell plates *17/32*
 Diameter of rivet holes *7/8"* whether punched or drilled *drilled* pitch of rivets *3 3/4"* Lap of plating *6 1/4"*
 Percentage of strength of longitudinal joint *76%* working pressure of shell by rules *76 lbs.* size of manholes in shell *12" x 16"*
 Diameter of compensating rings *17/32" x 6"* No. of Furnaces in each boiler *two* Description of Furnaces *plain*
 Inside diameter *36"* length *6'-6"* thickness of plates *7/16"* description of joint *welded* if rings are fitted _____
 Test length between rings _____ working pressure of furnace by the rules *97 lbs* combustion chamber plating, thickness, sides *7/16"* back *7/16"* top *7/16"*
 Diameter of stays to ditto, sides *8 1/2" x 8"* back *8 1/2"* top *8"* If stays are fitted with nuts or riveted heads *into inside* working pressure of plating by rules _____
 Diameter of stays at smallest part *1 1/8"* working pressure of ditto by rules *45 lbs* end plates in steam space, thickness *5/8" riv. wash*
 Diameter of stays to ditto *14"* how stays are secured *nuts* working pressure by rules *40 lbs* diameter of stays at largest part *2" bars* working pressure by rules *70 lbs* Front plates at bottom, thickness *5/8"* Back plates, thickness *5/8"*
 Smallest pitch of stays _____ working pressure by rules _____ Diameter of tubes *3 1/2"* pitch of tubes *4 5/8"* thickness of tube _____
 Diameter of tubes, front *5/8"* back *5/8"* how stayed *stayed* pitch of stays *9 1/2"* width of water spaces *5 1/2"*
 Diameter of Superheater or Steam chest *36"* length *36"* thickness of plates *7/8"* description of longitudinal joint *lap* diam. of rivet holes *7/8"*
 Diameter of rivets *3/4"* 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 *7/16"* how stayed *drilled stay*
 Superheater or steam chest; how connected to boiler *d. riv. flange*

10543 gls

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 safety
 valves _____ No. of safety valves _____ area of each _____ if fitted with easing gear _____ if steam from main boilers can
 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 above mentioned boiler has been built & tested as required by the Society's Rules and has now been forwarded to Aberdeen where it is intended to have it fitted on board the Vessel. — This report forwarded to Aberdeen Surveyor for Completion. — J. M. Sanderson Glasgow 4/3/91. —

The new main boiler has been fitted on board and the blow off cock removed to the upper turn of ledge. The vessel has been placed in the Aberdeen dry dock and the propeller, sternpost, sea-cocks, and fastenings examined. The cylinders, pistons, slide valves, pumps, condenser and shafting examined and placed in good condition. Donkey boiler opened up and examined. Shell plating somewhat pitted. drilled test hole in same and found to be $\frac{3}{8}$ " in thickness. Safety valves tested and adjusted to the working pressure. The Engines and Boilers of this vessel are now in good working condition and eligible in my opinion to receive the notification of L. M. 65/91. + N 1391 in the Register Book

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

Special .. £ 3 : 3 :
 Donkey Boiler Fee .. £ 3 : 10 :

Certificate (if required) .. £ : :
 To be sent to per margin.

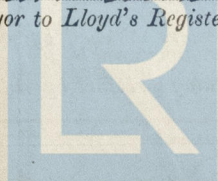
(Travelling Expenses, if any, £ ..)

Committee's Minute

FRI 5 JUN 1891

+ N 1391 L. M. 65/91

G. L. Hindmarsh
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Lloyd's Register Foundation