

REPORT ON MACHINERY.

No. *1917* Port of *Glasgow*
 No. in Survey held at *Glasgow* Date, first Survey *16th Oct. 1888* Last Survey *28th June 1889*
 Reg. Book. on the *S. S. "Baron Eliebank"* (Number of Visits *29*)
 Master *James Murray* Built at *Glasgow* By whom built *Mundoch & Murray* When built *1889*
 Engines made at *Glasgow* By whom made *D. Stewart & Co.* when made *1889*
 Boilers made at *Glasgow* By whom made *D. Stewart & Co.* when made *1889*
 Registered Horse Power *155* Owners *H. Hogarth* Port belonging to *Androssau*

ENGINES, &c.—

Description of Engines *Triple Expansion (three cranks)*
 Diameter of Cylinders *19½, 30½ & 50"* Length of Stroke *39"* No. of Rev. per minute *70* Point of Cut off, High Pressure *var* Low Pressure *var*
 Diameter of Screw shaft *10"* Diam. of Tunnel shaft *9½"* Diam. of Crank shaft journals *10½"* Diam. of Crank pin *10"* size of Crank webs *built*
 Diameter of screw *14-2"* Pitch of screw *16-0"* No. of blades *4* state whether moveable *yes* total surface *500ft²*
 No. of Feed pumps *2* diameter of ditto *3½"* Stroke *15"* Can one be overhauled while the other is at work *yes*
 No. of Bilge pumps *2* diameter of ditto *4"* Stroke *15"* Can one be overhauled while the other is at work *yes*
 Where do they pump from *all compartments*
 No. of Donkey Engines *two* Size of Pumps *5" x 8½" x 3½"* Where do they pump from *Water, Sea*
Tanks & bilges
 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 *4½"* Are they connected to condenser or to circulating pump *yes*
 How are the pumps worked *by levers off int. to cyl. crankhead*
 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
 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
 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 in dry dock *see Greenock Report No 9702. attached*
 Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *upper platform*

BOILERS, &c.—

Number of Boilers *two* Description *S.E. Multitubular* Whether Steel or Iron *Steel*
 Working Pressure *160 lbs.* Tested by hydraulic pressure to *320 lbs.* Date of test *9th May 1889*
 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 *—*
 No. of square feet of fire grate surface in each boiler *42* Description of safety valves *direct spring* No. to each boiler *two*
 Area of each valve *5"* 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* *9"* Diameter of boilers *12-8"*
 Length of boilers *9-10½"* description of riveting of shell long. seams *d. butt st.* circum. seams *d. riv. lap* Thickness of shell plates *1½"*
 Diameter of rivet holes *1¾"* whether punched or drilled *drilled* pitch of rivets *7.125"* Lap of plating *18½" butt st.*
 Percentage of strength of longitudinal joint *83%* working pressure of shell by rules *160 lbs.* size of manholes in shell *12" x 16"*
 Size of compensating rings *McNeill's patent ring & door* No. of Furnaces in each boiler *2*
 Outside diameter *44"* length, top *6-6"* bottom *9-4"* thickness of plates *9/16"* description of joints *Purves patent* if rings are fitted *—*
 Greatest length between rings *—* working pressure of furnace by the rules *160 lbs.* combustion chamber plating, thickness, sides *19/32"* back *19/32"* top *19/32"*
 Pitch of stays to ditto, sides *7½"* back *7½"* top *7½" x 8½"* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *190 lbs.* Diameter of stays at smallest part *1½"* working pressure of ditto by rules *160 lbs.* end plates in steam space, thickness *15/16" & 7/8" double pl.*
 Pitch of stays to ditto *15" x 14"* how stays are secured *d. nuts* working pressure by rules *165 lbs.* diameter of stays at smallest part *3" iron bars* working pressure by rules *200 lbs.* Front plates at bottom, thickness *13/16"* Back plates, thickness *7/8"*
 Greatest pitch of stays *—* working pressure by rules *—* Diameter of tubes *3½"* pitch of tubes *4½"* thickness of tube plates, front *7/8"* back *7/8"* how stayed *stayed* pitch of stays *9½"* width of water spaces *6"*
 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 *—*

DONKEY BOILER— Description *Vertical (with Crown tubes) Reel.*
Made at *Glasgow* by whom made *D. Stewart & Co* when made *1889* where fixed *Stokehold*
Working pressure *70 lbs* tested by hydraulic pressure to *140 lbs* No. of Certificate *2160* fire grate area *22 ft²* description of safety
valves *direct spring* No. of safety valves *One* area of each *9.62* if fitted with easing gear *Yes* if steam from main boilers can
enter the donkey boiler *no* diameter of donkey boiler *6'-6"* length *13'-0"* description of riveting *single & double*
Thickness of shell plates *7/16* diameter of rivet holes *3/4"* whether punched or drilled *drilled* pitch of rivets *3 1/4"* lap of plating *4"*
per centage of strength of joint *74* thickness of crown plates *9/16* stayed by *dished & sil 2" rod stays*
Diameter of furnace, top *5'-4"* bottom *5'-9"* length of furnace *6'-3"* thickness of plates *1/2"* description of joint *lap*
Thickness of furnace crown plates *1/2"* stayed by *dished & sil 2" rod stays* working pressure of shell by rules
Working pressure of furnace by rules diameter of uptake *16"* thickness of plates *7/16* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *Two propeller blades and studs —*
Fwd and hidge pump valves & seats — Valves for donkey
Top and bottom end bolts, main bearing and
coupling bolts. Bolts, nuts iron & assorted —
The foregoing is a correct description,

D. Stewart & Co Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The above mentioned*)
engines and boilers, which have been built under
Special Survey, are now completed on board in
in a satisfactory manner, of good workmanship
and material and this machinery is now in
*my opinion eligible to the notation: **+ L.M.C. 6.89.***
in the Society's Register Book —

It is submitted that this vessel is
eligible to have + L.M.C. 6.89.
recorded. W.A.
22-6-89.

The amount of Entry Fee .. £ *2* : *0* : *0* received by me,

Special ..

£ *23* : *5* : *0*

Donkey Boiler Fee ..

£

15/-

Certificate (if required) ..

£

0

To be sent as per margin.

(Travelling Expenses, if any, £ ..)

Committee's Minute

25 JUNE 1889

+ L.M.C. 6.89

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

Glasgow.