

REPORT ON MACHINERY.

No. in Survey held at *Glasgow* Date, first Survey *18th May 1884* Last Survey *16th March 1884*
 Book. *S. S. "Star of Victoria"* (Number of Visits *41*)
 Supn the *J. Smith* Built at *Belfast* By whom built *Workman & Clark* When built *1884*
 Engines made at *Glasgow* By whom made *John & James Thomson* when made *1884*
 Makers made at *"* By whom made *"* when made *1884*
 Registered Horse Power *350* Owners *James P. Corry & Coy* Port belonging to *Belfast*

GINES, &c.
 Description of Engines *Triple Expansion*
 Diameter of Cylinders *25 1/2" 43" 6 1/2"* Length of Stroke *48"* No. of Rev. per minute *40* Point of Cut off, High Pressure *1/2* Low Pressure *1/3*
 Diameter of Screw shaft *13 1/2"* Diam. of Tunnel shaft *12 3/4"* Diam. of Crank shaft journals *13 1/2"* Diam. of Crank pin *13 1/2"* size of Crank webs *9 1/2" x 14 3/4"*
 Diameter of screw *1 1/4"* Pitch of screw *19 1/2"* No. of blades *Low* state whether moveable *Yes* total surface *82.4 ft²*
 Diameter of Feed pumps *Two* diameter of ditto *4"* Stroke *24"* Can one be overhauled while the other is at work *Yes*
 Diameter of Bilge pumps *Two* diameter of ditto *4"* Stroke *24"* Can one be overhauled while the other is at work *Yes*
 Where do they pump from *All Compartments*
 No. of Donkey Engines *One* Size of Pumps *10 cwt 4" x 12" Stroke* Where do they pump from *Ballast & Bilges*
Two (Weirs) 8" 6" x 18"
 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 *4" valve* Are they connected to condensers or to circulating pump *To Circulating*
 How are the pumps worked *By levers*
 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 *Below 3 ft 7" 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*
 Are that 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 *Immediately before launching Jan 21st*
 Is the screw shaft tunnel watertight *Yes* and fitted with a sluice door *Yes* worked from *Upper deck*

BOILERS, &c.
 Number of Boilers *Two* Description *Round Horizontal double ended* Whether Steel or Iron *Steel*
 Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs* Date of test *11th Feb 1884*
 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 *"*
 Area of square feet of fire grate surface in each boiler *94 ft²* Description of safety valves *Direct Spring* No. to each boiler *Two*
 Area of each valve *9.62"* Are they fitted with easing gear *Yes* No. of safety valves to superheater *1* area of each valve *"*
 Are they fitted with easing gear *"* Smallest distance between boilers and bunkers or woodwork *10"* Diameter of boilers *12' 9"*
 Length of boilers *14 ft* description of riveting of shell long. seams *Double riveted* circum. seams *Double riveted* thickness of shell plates *1 3/16"*
 Diameter of rivet holes *1 7/16"* whether punched or drilled *Drilled* pitch of rivets *4 7/8" + 3 7/8"* Lap of plating *Straps 18"*
 Percentage of strength of longitudinal joint *84.6%* working pressure of shell by rules *162 lbs* size of manholes in shell *16" x 12"*
 Size of compensating rings *Large ring double riveted* No. of Furnaces in each boiler *Six*
 Outside diameter *3' 0"* length, top *6' 9"* bottom *6' 9"* thickness of plates *8/16"* description of joint *Corrugated* if rings are fitted *"*
 Greatest length between rings *"* working pressure of furnace by the rules *166 lbs* combustion chamber plating, thickness, sides *8/16"* full back *"* top *8/16"* full
 Pitch of stays to ditto, sides *4" x 4"* back *"* top *4" x 8"* If stays are fitted with nuts or riveted heads *Nuts* working pressure of plating by rules *160 lbs* Diameter of stays at smallest part *1 1/4"* working pressure of ditto by rules *161 lbs* and plates in steam space, thickness *1 7/16"* with doubling *10"*
 Smallest part *2 3/4" = 4.56"* working pressure by rules *160 lbs* Front plates at bottom, thickness *1 3/16"* Back plates, thickness *"*
 Greatest pitch of stays *"* working pressure by rules *"* Diameter of tubes *3 1/2"* pitch of tubes *4 7/8" x 4 7/8"* thickness of tube plates, front *1 1/4"* back *1 1/4"* how stayed *By tubes* pitch of stays *9 1/2" x 9 3/4"* width of water spaces *6"*
 Diameter of Superheater or Steam chest *None* 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

Round Horizontal

Made at *Glasgow* by whom made *John & James Thomson* when made *1884* where fixed *On upper*

Working pressure *90 lbs* tested by hydraulic pressure to *180 lbs* No. of Certificate *1441* fire grate area *24 ft²* description

valves *Direct Spring* No. of safety valves *Two* area of each *4"* if fitted with easing gear *Yes* if steam from main

enter the donkey boiler *No* diameter of donkey boiler *8' 6"* length *8' 3"* description of riveting *Lap joint tube*

Thickness of shell plates *1 3/16"* diameter of rivet holes *1 1/16"* whether punched or drilled *Drilled* pitch of rivets *3 1/2"* lap of plating *0*

per centage of strength of joint *57 3/4%* thickness of *end* plates *1 1/16"* stayed by *1 3/8" Steel Stays 14" x 14" pitch*

Diameter of furnace, *top* *32"* bottom *—* length of furnace *5' 9"* thickness of plates *8/16"* description of joint *Lap*

Thickness of *Combustion Chamber* plates *8/16"* stayed by *Screw Stays 1 1/2" dia 8 1/2" x 8 1/2" pitch* working pressure of shell by rules *98*

Working pressure of furnace by rules *121 lbs* diameter of uptake *—* thickness of plates *—* thickness of water tubes *—*

SPARE GEAR. State the articles supplied:— *Two propeller blades, 4 Connecting rod bolts (top +*

bottom) 2 main bearing bolts, 2 Eccentric strap bolts, 6 Shaft coupling bolts, 2 Test

Valves, 2 Ridge valves, 1 pair Crank pin brasses, 1 piston rod, 1 Link & 1 Circulating

pump rod, 2 Slide valve spindles, 2 Air pump guards & nuts, and a considerable quantity

The foregoing is a correct description, of bolts nuts & studs assorted also Cylinders, & esc

John & James Thomson Manufacturers

General Remarks

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

These Engines & Boilers are of good

workmanship and materials and are now in good order & safe in

working condition & liable in my opinion to be noted in the Register

"LLOYD'S M.C." 3/84

The Sea valves and cocks and stern tube were fitted on this vessel at Belfast in a satisfactory manner, before vessel was launched.

James Mollison

This is submitted that this vessel is eligible to have the notification + 2 m & 3 m recorded

Boiler

The amount of Entry Fee .. £ *3* : - : - received by me, *(Signature)*

Special .. £ *34* : *10* : -

Donkey Boiler Fee .. £ - : - : -

Certificate (if required) .. £ - : - : - *25/3/1884*

To be sent as per margin.

(Travelling Expenses, if any, £ *1* : *13* : *0*)

Committee's Minute

TUESDAY 5 APRIL 1887

(Signature)

James Mollison

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

Clyde District
Lloyd's Register Foundation