

# REPORT ON MACHINERY.

No. *4484*

TUESDAY 1 FEB 1887

No. in Survey held at *Glasgow*  
Reg. Book.

Date, first Survey *15<sup>th</sup> Dec<sup>r</sup> 1885* Last Survey *29<sup>th</sup> Jan<sup>y</sup> 1887*  
(Number of Visits *49*) Tons *1506.42*

on the *S. S. "Queen Victoria"*

Master *J. A. Oregan* Built at *Glasgow* By whom built *A. Stephen & Sons* When built *1884*

Engines made at *Glasgow* By whom made " " " when made *1884*

Boilers made at " By whom made " " " when made *1884*

Registered Horse Power *240* Owners *Thomas Dunlop & Sons* Port belonging to *Glasgow*

## ENGINES, &c.—

Description of Engines *Triple Expansion (Three Cranks)*  
Diameter of Cylinders *20" 33" 51"* Length of Stroke *42"* No. of Rev. per minute *60* Point of Cut off, High Pressure *26"* Low Pressure *21"*  
Diameter of Screw shaft *11 1/2"* Diam. of Tunnel shaft *11"* Diam. of Crank shaft journals *11 1/2"* Diam. of Crank pin *11 1/2"* size of Crank web *4 1/2" x 4 1/2"*  
Diameter of screw *16" 6"* Pitch of screw *1 1/4" 0"* No. of blades *4* state whether moveable *Yes* total surface *53 sq ft*  
No. of Feed pumps *Two* diameter of ditto *3 1/2"* Stroke *24"* Can one be overhauled while the other is at work *Yes*  
No. of Bilge pumps *Two* diameter of ditto *4 1/2"* Stroke *24"* 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 *4" x 4" Stroke x 1 1/4" pump* Where do they pump from *Sea & Astwell + Ballast Tanks*  
*8" x 8" x 8"*

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"* Are they connected to condenser, 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 *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 *Bilge pipes to Forehold* How are they protected *By wood casing*  
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 *On Slip previous to launch*  
Is the screw shaft tunnel watertight *Yes* and fitted with a sluice door *Yes* worked from *Upper platform*

## BOILERS, &c.—

Number of Boilers *One* Description *Round Horizontal* Whether Steel or Iron *Steel*  
Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs* Date of test *18<sup>th</sup> December 1886*  
Description of superheating apparatus or steam chest *Longitudinal Receiver*  
Can each boiler be worked separately *—* Can the superheater be shut off and the boiler worked separately *—*  
No. of square feet of fire grate surface in each boiler *44 sq ft* 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 *—* area of each valve *—*  
Are they fitted with easing gear *Yes* Smallest distance between boilers and bunkers or woodwork *15"* Diameter of boilers *12" 0 1/2"*  
Length of boilers *14' 4 1/8"* description of riveting of shell long. seams *Double riveted* circum. seams *Double riveted* Thickness of shell plates *1 1/8"*  
Diameter of rivet holes *1 1/4"* whether punched or drilled *Drilled* pitch of rivets *4 1/2" x 3 1/8"* Lap of plating *Straps 1" 8 1/2" x 1 1/8"*  
Per centage of strength of longitudinal joint *83%* working pressure of shell by rules *168 lbs* size of manholes in *16" x 12"*  
Size of compensating rings *Double piece* No. of Furnaces in each boiler *Four*  
Outside diameter *3' 8"* length, top *9' 0 1/2"* bottom *8' 6"* thickness of plates *9/16"* description of joint *Corrugated* if rings are fitted *—*  
Greatest length between rings *—* working pressure of furnace by the rules *160 lbs* combustion chamber plating, thickness, sides *1/32"* back *—* top *1/32"*  
Pitch of stays to ditto, sides *4" x 4"* back *—* top *4" x 4 1/4"* stays are fitted with nuts or riveted heads *Nuts* working pressure of plating by rules *146 lbs* Diameter of stays at smallest part *1 1/4"* working pressure of ditto by rules *160 lbs* end plates in steam space, thickness *1 1/2"*  
Pitch of stays to ditto *15" x 15 3/4"* how stays are secured *By double nut* working pressure by rules *160 lbs* diameter of stays at smallest part *4 1/4" area* working pressure by rules *163 lbs* Front plates at bottom, thickness *15/16"* Back plates, thickness *—*  
Greatest pitch of stays *—* working pressure by rules *—* Diameter of tubes *3 1/2"* pitch of tubes *4 1/8" x 4 3/4"* thickness of tube plates, front *1 1/16"* back *15/16"* how stayed *By tubes* pitch of stays *9 1/4" x 1 3/4"* width of water spaces *6"*  
Diameter of Superheater or Steam chest *3 ft* length *9' 6"* thickness of plates *1/16"* description of longitudinal joint *Double riv.* diam. of rivet holes *13/16"*  
Pitch of rivets *2 3/16"* 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 *9/16"* how stayed *One stay 2 1/8" dia*  
Superheater or steam chest; how connected to boiler *Seck piece*

[Form No. 6] (State of Report as sent on the H.M.S. of the Ship)



7784 gls.

DONKEY BOILER—

Description *Round Vertical*

Made at *Glasgow* by whom made *A. Stephen & Sons* when made *1884* where fixed *above*  
Working pressure *70 lbs* tested by hydraulic pressure to *140 lbs* No. of Certificate *1481* fire grate area *23 ft<sup>2</sup>* description of safety  
valves *Direct Spring* No. of safety valves *Two* area of each *4"* if fitted with easing gear *Yes* if steam from main boilers can  
enter the donkey boiler *No* diameter of donkey boiler *6' 6"* length *12 ft high* description of riveting *Lap double*  
Thickness of shell plates *1 3/32"* diameter of rivet holes *7/8"* whether punched or drilled *Drilled* pitch of rivets *3 1/4"* lap of plating *4"*  
per centage of strength of joint *73* thickness of crown plates *1 1/16"* stayed by *ten stays 1 3/4" dia*  
Diameter of furnace, top *5' 1"* bottom *5' 10"* length of furnace *5' 9"* thickness of plates *8/16"* description of joint *Lap joint*  
Thickness of furnace crown plates *7/16"* stayed by *as above* working pressure of shell by rules *80 lbs*  
Working pressure of furnace by rules *—* diameter of uptake *15"* thickness of plates *8/16" iron* thickness of water tubes *7/16"*

SPARE GEAR. State the articles supplied:

*Two propellers blades with 3 studs & nuts, 2 bolts & nuts for tops & 2  
bolts & nuts for bottom ends of connecting rods, 2 main bearing bolts & coupling bolts, 1 set of valves with seat  
for feed pumps and 1 set for bilge pumps, also valves for Air & circulating pumps, 6 boiler  
tubes & 6 Condenser tubes, Assortment of bolts, nuts, iron &c*

The foregoing is a correct description,

*A. Stephen & Sons* Manufacturer.

General Remarks

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

*These Engines & Boilers are  
of good workmanship & materials and are now in good order  
& safe working condition and eligible in my opinion to be entered  
in the Register Book. **Lloyd's M.C. 1/84***

*This submitted that this vessel  
is eligible to have the notification  
+ sub 157 recorded.*

*12/87*

The amount of Entry Fee .. £ *2* : : received by me, *(Signature)*

Special .. £ *32* : : :

Donkey Boiler Fee .. £ : : :

Certificate (if required) .. £ : : : *31/1/1884*

To be sent as per margin.

(Travelling Expenses, if any, £ *8/-*)

Committee's Minute

**TUESDAY 1 FEB 1887**

*L M B*

*James Morrison*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

*Clyde District*

Lloyd's Register  
Foundation