

# REPORT ON MACHINERY.

No. 5850.

No. in Survey held at  
Reg. Book.

Date, first Survey 20<sup>th</sup> April

Received at London Office  
15 SEPT 1885  
Last Survey 12<sup>th</sup> Aug 1885.

(Number of Vessels 15)

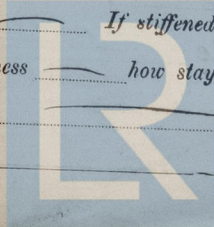
on the Steamer "Sir Robert Peel"  
Master J. W. Harlock Built at Middlesbrough By whom built Messrs. Craggs & Sons  
Engines made at Middlesbrough By whom made Westgarth, English & Co. When built 1885.  
Boilers made at Middlesbrough By whom made Westgarth, English & Co. when made 1885.  
Registered Horse Power 50 Owners E. Carey when made 1885.  
Port belonging to London.

## ENGINES, &c.—

Description of Engines Compound, Inverted, 2 Cylinders.  
Diameter of Cylinders 18" x 36" Length of Stroke 24" No. of Rev. per minute 90 Point of Cut off, High Pressure 1/2 stroke Low Pressure 1/2 stroke  
Diameter of Screw shaft 6 1/2" Diam. of Tunnel shaft 6" Diam. of Crank shaft journals 6 1/2" Diam. of Crank pin 6 1/2" size of Crank webs 7 1/2" x 5"  
Diameter of screw 8.9" Pitch of screw 11.0" No. of blades 4 state whether moveable 40 total surface 24 sq. ft.  
No. of Feed pumps one diameter of ditto 3" Stroke 9" Can one be overhauled while the other is at work  
No. of Bilge pumps one diameter of ditto 3" Stroke 9" Can one be overhauled while the other is at work  
Where do they pump from After well, Engine room & main hold.  
No. of Donkey Engines 2 Size of Pumps (3 x 6") (1 1/2" x 4") Where do they pump from (Bilges & after well, Engine room & main hold.) (See to donkey boiler)  
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" dia. Are they connected to condenser, or to circulating pump Circulating pump.  
How are the pumps worked By levers from the low pressure piston crosshead.  
Are the connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves & cocks.  
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  
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 in dry dock 12<sup>th</sup> August 1885.  
Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from upper platform in Engine room.

## BOILERS, &c.—

Number of Boilers One Description Cylindrical, built. Single Ended Whether Steel or Iron Steel  
Working Pressure 80 lbs. Tested by hydraulic pressure to 160 lbs. Date of test 26<sup>th</sup> June 1885.  
Description of superheating apparatus or steam chest none  
Can each boiler be worked separately Can the superheater be shut off and the boiler worked separately no superheater  
Area of square feet of fire grate surface in each boiler 28.25 Description of safety valves Spring No. to each boiler 2  
Area of each valve 9.62 Are they fitted with easing gear yes No. of safety valves to superheater  
Are they fitted with easing gear Smallest distance between boilers and bunkers 12" Diameter of boilers 11.0  
Thickness of shell plates 5/8"  
Description of riveting of shell long. seams double riv. butt strap circum. seams double riv. lap  
Pitch of rivets 3 3/4" Lap of plating 4 1/2"  
Working pressure of shell by rules 88 lbs. size of manholes in shell 16" x 12"  
No. of Furnaces in each boiler 2  
Diameter of rivet holes 15/16" whether punched or drilled drilled  
Pitch of rivets 3 3/4"  
Lap of plating 4 1/2"  
Working pressure of shell by rules 88 lbs. size of manholes in shell 16" x 12"  
No. of Furnaces in each boiler 2  
Diameter of stays at smallest part 1 3/16" working pressure of ditto by rules 82 lbs. end plates in steam space, thickness 3/4"  
Diameter of stays at largest part 1 1/2" x 15 1/2" how stays are secured double nuts & washers working pressure by rules 83 lbs. diameter of stays at  
Smallest part 1 1/16" working pressure by rules 82 lbs. Front plates at bottom, thickness 7/8" Back plates, thickness 7/8"  
Pitch of stays 12" working pressure by rules 83 lbs. Diameter of tubes 3 1/2" pitch of tubes 4 3/4" x 4 3/4" thickness of tube  
How stayed stay tubes pitch of stays 9 1/2" x 9 1/2" width of water spaces 1 1/4"  
Diameter of Superheater or Steam chest length thickness of plates description of longitudinal joint diam. of rivet holes  
Working pressure of shell by rules diameter of flue thickness of plates If stiffened with 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 *Cylindrical, Vertical, 3 Horizontal water tubes*  
 Made at *Stockton* by whom made *Riley Bros.* when made *14.7.85* where fixed *In stockhole*  
 Working pressure *80 lbs.* tested by hydraulic pressure to *160 lbs.* No. of Certificate *1248* fire grate area *11.04 sq. ft.* description of safety  
 valves *Spring* No. of safety valves *one* area of each *7.07* if fitted with easing gear *yes* if steam from main boilers can  
 enter the donkey boiler *no* diameter of donkey boiler *4.6"* length *8.6"* description of riveting *double riveted lap*  
 Thickness of shell plates *13/32"* diameter of rivet holes *13/16"* whether punched or drilled *punched* pitch of rivets *5 1/16"* lap of plating *5"*  
 per centage of strength of joint *71* thickness of crown plates *13/32"* stayed by *uptake x 5 vertical stays 1 1/2" dia.*  
 Diameter of furnace, top *3.8"* bottom *3.11 1/16"* length of furnace *3.8"* thickness of plates *13/32"* description of joint *single riv? lap.*  
 Thickness of furnace crown plates *13/32"* stayed by *uptake x 5 vertical stays 1 1/2" dia* working pressure of shell by rules *82 lbs.*  
 Working pressure of furnace by rules *82 lbs.* diameter of uptake *12"* thickness of plates *3/8"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *1 Propeller, 2 main bearing bolts, 2 top end x 2 bottom*  
*end bolts for connecting rod, 1 set of coupling bolts, 2 sets of springs for*  
*the high and low pressure pistons, 1 set of feed-pump valves, 1 bilge pump*  
*valves, 2 Escape valve springs for the cylinders, 2 Safety valve springs for the main &*  
*The foregoing is a correct description,* *donkey boiler, 5 dog bolts & nuts, Iron assorted*  
*Westgarth English & Co. Manufacturers of Engines & Main Boilers.*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*The machinery and boilers of this vessel have been*  
*constructed under Special Survey, and the quality of*  
*the workmanship is good, they have been tried under*  
*steam and found to work well and are now in*  
*safe and efficient working condition and eligible,*  
*in my opinion, to have the notification* *L.M.C. 8.85.*  
*recorded in the Register of this Society*

*It is submitted that this*  
*vessel is eligible to have the*  
*notification + fund*  
*4.85 recorded*  
*12/9/85*

The amount of Entry Fee *£ 1 : 0 : 0* received by me,  
 Special .. *£ 8 : 0 : 0*  
 Donkey Boiler Fee .. *£ " : " : "*  
 Certificate (if required) .. *£ " : " : "* *12.9.1885*  
 To be sent as per margin.  
 (Travelling Expenses, if any, £ )

Committee's Minute *FRIDAY 13 SEPT 1885*

*[Large blue ink signature]*

*A. Stoddart*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.