

# REPORT ON MACHINERY.

No. 7

Port of *Falmouth*

Received at London Office *MON. 9 APR 1900*

Survey held at *Penzance* Date, first Survey *26<sup>th</sup> March* Last Survey *4<sup>th</sup> April 1900*

(Number of Visits *2*)

main boiler on the *Iron Screw Steamer "Lord Pembroke"* Tons { Gross *not known*  
Net " "

Range of *H. J. Cook* Built at *not known* By whom built *The owner cannot give any information with regard to this* When built " "

made at *London* By whom made *Lawford & Co* when made *1884*

made at *no boiler on board* By whom made *The boiler was taken out of the vessel before she was purchased,* when made *✓*

red Horse Power *not known,* Owners *Bain, Sons & Co* Port belonging to *Penzance*

Horse Power as per Section 28

DESCRIPTION OF ENGINES, &c.— Description of Engines *Inverted Compound Surface Condensing* No. of Cylinders *Two,*

er of Cylinders *22," 40,"* Length of Stroke *27,"* Revolutions per minute *✓* Diameter of Screw shaft *as per rule 4 3/4"*

er of Tunnel shaft *as per rule 6 3/8"* Diameter of Crank shaft journals *6 3/4"* Diameter of Crank pin *6 3/4"* Size of Crank webs *5 1/2 x 8 3/4"*

of blades *as fitted 3* State whether moveable *yes* Total surface

Feed pumps *Two* Diameter of ditto *3"* Stroke *13 1/2"* Can one be overhauled while the other is at work *yes*

Bilge pumps *Two* Diameter of ditto *3"* Stroke *13 1/2"* Can one be overhauled while the other is at work *yes*

Donkey Engines *Two,* Sizes of Pumps *Main Fuel donkey 7 1/2 stroke, 3 1/4 Ram, Ballast and Bilge donkey 8" stroke 6 Ram,* No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *Three, 2 1/2 diam, one in B. S. fitted at after in Holds, &c. none fitted in the Holds,*

bilge injections *One* sizes *6 7/8"* Connected to condenser, or to circulating pump *Pump* Is a separate donkey suction fitted in Engine room & size *yes, 2 1/2,"*

the bilge suction pipes fitted with roses *yes* Are the roses in Engine room always accessible *yes* Are the sluices on Engine room bulkheads always accessible *the*

connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *altered, valves and bolts*

ey 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*

ey 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*

pipes are carried through the bunkers *None,* How are they protected *✓*

pipes, cocks, valves, and pumps in connection with the machinery *and all boiler mountings accessible at all times* *yes,*

the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *yes*

stern tube, propeller, screw shaft, and all connections examined in dry dock *not known* Is the screw shaft tunnel watertight *yes*

fitted with a watertight door *yes* worked from *The Top Engine Room Platform,*

## BOILERS, &c.—

(Letter for record)

Total Heating Surface of Boilers

Description of Boilers Working Pressure Tested by hydraulic pressure to

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to

Area of each valve Pressure to which they are adjusted Are they fitted

Smallest distance between boilers or uptakes and bunkers or woodwork Mean diameter of boilers

Material of shell plates Thickness Description of riveting: circum. seams long. seams

Pitch of rivets Lap of plates or width of butt straps

Working pressure of shell by rules Size of manhole in shell

No. and Description of Furnaces in each boiler Material Outside diameter

Thickness of plates crown bottom Description of longitudinal joint No. of strengthening rings

Combustion chamber plates: Material Thickness: Sides Back Top Bottom

If stays are fitted with nuts or riveted heads Working pressure by rules

Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Area supported by each stay Working pressure by rules Material of Front plates at bottom

Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Working pressures by rules Girders to Chamber tops: Material Depth and

Length as per rule Distance apart Number and pitch of Stays in each

Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

Distance between rings Working pressure by rules End plates: Thickness How stayed

Area of safety valves to superheater Are they fitted with easing gear



**DONKEY BOILER**— Description *None fitted*  
 Made at \_\_\_\_\_ By whom made \_\_\_\_\_  
 Working pressure tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_  
 No. of safety valves Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_  
 enter the donkey boiler Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_  
 Description of riveting long seams \_\_\_\_\_ Diameter of rivets \_\_\_\_\_  
 Lap of plating Per centage of strength of joint Rivets \_\_\_\_\_ Thickness of she \_\_\_\_\_  
 Plates \_\_\_\_\_  
 Dia. of stays Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length \_\_\_\_\_  
 joint Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_  
 Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thi \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:—

The foregoing is a correct description,  
 Manufacturer.

**General Remarks** (State quality of workmanship, opinions as to class, &c. *Held a Survey on the Machinery of this vessel as requested by the Secretary's letter of the 3<sup>rd</sup> April 1900. The Engines as far as could be seen without being opened out are in a good and efficient condition. The Council had given orders for the Engines to be opened out for examination but was disappointed in consequence of the party who had to do this work not being able to come until the day after the survey. The Councils when about to buy this vessel found the Boiler required an extensive Repair, and refused to purchase it, so the War Department took it. The Board told me they are arranging to purchase a new Boiler that has been constructed under the Society's Rules, for a working pressure of 80 lbs. The reason for getting a Boiler for this pressure is in case they wish to reduce the Ho. Cylinder from 22" to 20". I am of opinion that when the Machinery of this vessel has been opened out and examined, and a new Boiler fitted it will be eligible to Class in the Register Book.*

*It is submitted that - this case be deferred pending a further report*

*Found 9.4.00*

*A.S.  
9.4.00*

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special .. .. .	£	:	:	.....18.....
Donkey Boiler Fee .. .. .	£	:	:	.....18.....
Travelling Expenses (if any) £	:	:	:	.....18.....

*P. H. Cooper*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute **TUES. 30 OCT 1900**

Assigned



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