

## LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S CERTIFICATE, & REPORT.  
ENGINES.

Rev 10/9/75

Description *Compound Oscillating*  
 Made by *J. Penn & Son*  
 In the year *1845*  
 Present condition *Good*  
 Diameter of cylinder *45 1/4*  
 Length of stroke *4 1/2*  
 No. of revolutions per minute  
 Point of cut off *1/6 to 1/2*  
 Paddle, or Screw *Paddle*  
 Nominal Horse Power *160*  
 Diameter of screw, or of paddle wheel *20.6 outside*  
 Pitch of screw  
 No. of blades, ☒ total surface ☒  
 No. of bilge pumps *2* and size *6 1/2 dia, 15 stroke*  
 Do they pump from each compartment ☒  
 Is there provision made for pumping } *yes*  
 from the wings of the stoke hole }

Are all the bilge suction pipes fitted with roses *yes*  
 What vacuum and steam gauges are } *one steam to each boiler*  
 there attached to the engines } *vacuum to engine*  
 and boilers.....  
 No. of feed pumps *2* and sizes *6 1/2 dia. 15" stroke*  
 Description and size of } *Donk. Act. Pump 4" dia 8" stroke*  
 Donkey Engine...  
 Will it feed the boilers, pump } *yes*  
 from the bilges, and pump }  
 on deck .....  
 Can it be driven by steam } *yes*  
 from a separate boiler }  
 No. of bilge injections *one* and sizes *5 in.*  
 Suction to *Circ. Pump*  
 Are they fitted with non return valves *yes*  
 Is there a hand pump in the engine room *No*  
 Can it be worked by the main engines ☒  
 Is there a deck hose of sufficient length } *yes*  
 to reach to any part of the vessel }

## CONNECTIONS ON HULL.

Are all connections with the sea } *yes*  
 direct on the skin of the ship }  
 Are they Kingston valves or common cocks *Kingstons*  
 Are they fixed sufficiently high on } *No, Portable plates*  
 the ship's side to be seen } *in Engine Room must*  
 without lifting the stokehole } *be lifted.*  
 plates ..... *above*  
 Are the discharge pipes above or }  
 below the deep water line }  
 Are they each fitted with a discharge } *yes*  
 valve on the plating of the vessel }

Are any pipes carried through the bunkers *No*  
 If so state how protected  
 When was the stern tube, }  
 propeller, screw shaft, }  
 and all connections }  
 examined in dry dock }  
 How are the pipes, cocks, and valves } *Efficient Arrangement.*  
 arranged so as to prevent }  
 an unintentional connection }  
 between the sea and the bilge }  
 Have the bilge suction non- } *On donkey suction only.*  
 return valves fitted or not }

## BOILERS.

Number *Two*  
 Description *Cylindrical, Tubular*  
 Made by *J. Penn & Son*  
 In the year *1845*  
 Present condition *New*  
 When last extensively repaired  
 Working pressure *60 lbs.*  
 When tested by Hydraulic pressure *July 1845*  
 To what pressure tested *120 lbs.*  
 Any super-heating apparatus *No*  
 Describe it  
 Can each boiler be worked separately *yes*  
 Is each boiler fitted with a separate steam gauge *yes*

Can the super-heater be shut off and }  
 the boilers worked separately }  
 No. of safety valves on each boiler *Two*  
 Description and area of each safety valve *Direct Heights, B. 9 sq in.*  
 No. of square feet of fire-grate } *61*  
 surface in each boiler }  
 Is there a separate blow off and } *yes*  
 brine cock on each boiler, }  
 independent of those }  
 on the vessel's skin }  
 Is the screw shaft tunnel water }  
 tight and fitted with a }  
 sluice door on bulkhead }  
 Are all pipes, cocks, and roses in con- } *yes*  
 nection with these boilers acces- }  
 sible to the engineer at all times }

*J. M. Penn & Son* Manufacturer.

I hereby certify that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle)  
 Steam Vessel *Swift* owned by *General Steam Navigation Company*  
 of the Port of *London* of *Tons Register, and 160* Nominal Horse Power,  
 have been carefully inspected and examined by *me* at *Greenwich* and found to be  
 at this date, viz., *4 Sept 1875* in good order and safe working condition.

*William Parson*  
 Engineer Surveyor to Lloyd's Register of Shipping.