

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 & Co*
 In the year *1845*
 Present condition *Good*
 Diameter of cylinder *45 1/4*
 Length of stroke *4 9/16*
 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 there attached to the engines and boilers..... } *one steam to each boiler and Vacuum to Engine*
 No. of feed pumps *2* and sizes *6 1/2 dia. 15" stroke*
 Description and size of } *Doub. Act. Pump 4" dia 8" stroke*
 Donkey Engine... }
 Will it feed the boilers, pump from the bilges, and pump on deck } *yes*
 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 the ship's side to be seen without lifting the stokehole plates } *No, Portable plates in Engine Room must be lifted.*
 Are the discharge pipes above or below the deep water line } *above*
 Are they each fitted with a discharge valve on the plating of the vessel } *yes*

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 arranged so as to prevent an unintentional connection between the sea and the bilge } *Efficient Arrangement.*
 Have the bilge suction non-return valves fitted or not } *On donkey suction only.*

BOILERS.

Number *Two*
 Description *Cylindrical, Tubular*
 Made by *J. Penn & Co*
 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 Weights, 15.9 sq in*
 No. of square feet of fire-grate surface in each boiler } *61*
 Is there a separate blow off and brine cock on each boiler, independent of those on the vessel's skin } *yes*
 Is the screw shaft tunnel water tight and fitted with a sluice door on bulkhead
 Are all pipes, cocks, and roses in connection with these boilers accessible to the engineer at all times } *yes*

J. Penn & Co 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 *160* 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* 18 *75* in good order and safe working condition.

William Parler
 Engineer Surveyor to Lloyd's Register of Shipping.

