

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S CERTIFICATE, & REPORT.

ENGINES.

Description *Compound, Direct Acting, Inverted* Are all the bilge suction pipes fitted with roses *Yes*
 Made by *Wm Kemp & Hume Glasgow* What vacuum and steam gauges are there attached to the engines and boilers *1 Vacuum & 1 Steam attached to Engines*
 In the year *1875* No. of feed pumps *1* and sizes *2 3/4" x 13" stroke*
 Present condition *New* Description and size of Donkey Engine... *Inverted 4" dia x 3 1/2" stroke*
 Diameter of cylinder *18 1/2" & 32"* Will it feed the boilers, pump from the bilges, and pump on deck *Yes, Small one feeds the Boiler*
 Length of stroke *22"* Can it be driven by steam from a separate boiler *Yes*
 No. of revolutions per minute *85* No. of bilge injections *1* and sizes *2" connected to Air pump*
 Point of cut off *2" beyond half stroke or 13" of stroke* Are they fitted with non return valves *No, is fitted with a cock*
 Paddle, or Screw *Screw* Is there a hand pump in the engine room *Yes*
 Nominal Horse Power *4 1/2* Can it be worked by the main engines *No*
 Diameter of screw, or of paddle wheel *10" & 0"* Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*
 Pitch of screw *10" & 0"*
 No. of blades, *4* total surface *24 ft*
 No. of bilge pumps *1* and size *2 3/4" x 13" stroke*
 Do they pump from each compartment *No. pumps from fore compartment & Engine Room*
 Is there provision made for pumping from the wings of the stoke hole *Engine Room and Stokehole combined*

CONNECTIONS ON HULL.

Are all connections with the sea direct on the skin of the ship *Yes*
 Are they Kingston valves or common cocks *Screw down valves & Cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehole plates *No, Blow off cocks under stokehole plates the others under Engine Room platform*
 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 *All, except for Key Bilge discharge which is very high up.*
 Are any pipes carried through the bunkers *Yes bilge suction pipe to fore compartment*
 If so state how protected *Cased with strong wood*
 When was the stern tube, propellor, screw shaft, and all connections examined in dry dock *Examined on Slip while being fitted*
 How are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Sea & Bilge suction Cocks. Can only be opened one way at a time*
 Have the bilge suctions non-return valves fitted or not *No.*

BOILERS.

Number *One Round Horizontal*
 Description *Multitubular*
 Made by *Addison, Hamilton & Kearn Glasgow*
 In the year *1875*
 Present condition *New*
 When last extensively repaired
 Working pressure *65 lbs*
 When tested by Hydraulic pressure *April 21st 1875*
 To what pressure tested *Reported to be 130 lbs*
 Any super-heating apparatus *No*
 Describe it
 Can each boiler be worked separately *One boiler*
 Is each boiler fitted with a separate steam gauge *1 Gauge on Engine*
 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 *Steel loaded with weights 7.068" area*
 No. of square feet of fire-grate surface in each boiler *29 ft*
 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 *No. Tunnel, tubular iron casing*
 Are all pipes, cocks, and roses in connection with these boilers accessible to the engineer at all times *Those under stokehole plates have hand holes with covers fitted & those under E.R. platform have hatches fitted*

Kemp & Hume Manufacturer.

I hereby certify that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *Hibernian* owned by *Paul & McKenzie* of the Port of *Dublin* of *202 4/100* Tons Register, and *4 1/2* Nominal Horse Power, have been carefully inspected and examined by me at *Glasgow, & Port Glasgow* and found to be at this date, viz., *July 1st 1875* in good order and safe working condition.

James Morrison
 Engineer Surveyor to Lloyd's Register of Shipping.