

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

## ENGINEER SURVEYOR'S CERTIFICATE &amp; REPORT.

## ENGINES.

Rev 18/12/75

No 24904  
Port Lloyd  
Report (if any) on Hull of Vessel.

Description *Porta Compd. S. G. I. A. Engines*  
Made by *Howden of Glasgow*  
In the year *1870*  
Present condition *Good*  
Diameter of cylinders *1 off 34" 1 off 60"*  
Length of stroke *39"*  
No. of revolutions per minute *54*  
Point of cut off *adjustable 1/2 stroke*  
Paddle, or Screw *Screw*  
Nominal Horse Power *200*  
Diameter of screw, or of paddle wheel *15" 6*  
Pitch of screw *14" 0*  
No. of blades, *4* total surface *50ft.*  
No. of bilge pumps *2* and size *4"*  
Do they pump from each compartment *Yes*  
Is there provision made for pumping from the wings of the stoke hold *No*

Are all the bilge suction pipes fitted with roses *Yes*  
What vacuum and steam gauges are there attached to the engines and boilers..... *1. Steam gauge to each boiler 1. S. 1 Vacuum 1 B. Press To Engine*  
No. of feed pumps *2* and sizes *4 1/2"*  
Description and size of Donkey Engine... *I. A. 6" plunger*  
Will it feed the boilers, pump from the bilges, and pump on deck *Yes. and circulate thro' condenser*  
Can it be driven by steam from a separate boiler *Yes*  
No. of bilge injections *1* and sizes *4 1/2"*  
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 *Yes*  
Is there a deck hose of sufficient length to reach to any part of the vessel *Yes.*

## CONNECTIONS ON HULL.

Are all connections with the sea direct on the skin of the ship *Yes*  
Are they Kingston valves or common cocks *Common cocks*  
Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates *Not all but are easy of access.*  
Are the discharge pipes above or below the deep water line *Below*  
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 *Yes*  
When was the stern tube, propeller, screw shaft, and all connections examined in dry dock *At this time. screw shaft. not drawn out.*  
How are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Well arranged*  
Have the bilge suction non-return valves fitted or not *No*

## BOILERS.

Number *Two*  
Description *Circular. Return tubular*  
Made by *Forester & Coy*  
In the year *1875*  
Present condition *New*  
When last extensively repaired *Not yet.*  
Working pressure *75 lbs. (stated)*  
When tested by hydraulic pressure *at this time*  
To what pressure tested *120 lbs. seen*  
Any super-heating apparatus *No*  
Describe it *Yes*  
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.*  
No. of safety valves on each boiler *Two*  
Description and area of each safety valve *4 1/2" diam. low lead, = 14-18 area*  
No. of square feet of fire-grate surface in each boiler *58.5*  
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 *Yes*  
Are all pipes, cocks, and roses in connection with these boilers accessible to the engineer at all times *Yes.*

Manufacturer.

I hereby certify that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *"Orchis"* owned by *Hargrove & Coy.* of the Port of *Liverpool* of *1138* Tons Register, and *200* Nominal Horse Power, have been carefully inspected and examined by *Me* at *Liverpool* and found to be at this date, viz., *14th December 1875* in good order and safe working condition.

*J. G. Kinghorn*  
Engineer Surveyor to Lloyd's Register of Shipping.  
*See 2-2-11/12/75*  
*See Report in book No. 24904*  
*17/12/75*