

19470 Jan  
**LOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.**

**ENGINEER SURVEYOR'S REPORT ON MACHINERY.**

**ENGINES.**

Recd 19/10/77

Description *Comp'd Int'd J. A. McCandey* Are all the bilge suction pipes fitted with roses *Yes*  
 Made by *The Barrow S. B. Coy.* No. of feed pumps *2* and sizes *4" diam 15" stroke*  
 When *1877* At *Barrow* What gauges are there attached to the engines and boilers ... *1 Pressure in Strokehold*  
 Diameter of cylinder *1 1/2" 30"* Length of stroke *30* *1 - " - 1 Vacuum &*  
 No. of revolutions per minute *about 60* Description and size of Donkey Pumps ... *4" plunger J. A.*  
 Point of cut off *variable from 1/4* Where do they pump from ... *Sea & bilges to boilers deck and overboards*  
 Diameter of screw shaft *8 1/2"* No. of bilge injections *1* and sizes *4"*  
 Diameter of crank shaft journals *8 1/2"* Are they connected to air, or circulating pumps *air*  
 Diameter of screw, or of paddle wheel *13" 0"* Is there a hand pump in the engine room *Yes*  
 Pitch of screw *15" 0"* Can it be worked by the main engines *No*  
 No. of blades, *4* Total surface *45 ft.* Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*  
 No. of bilge pumps *2* and sizes *4" diam 15" stroke*  
 Do they pump from each compartment *Yes*

**MAIN BOILERS.**

Number *One* Description *Cyl'dr single ended of Submarine* Can the super-heater be shut off and the boilers worked separately *No superheater*  
 Made by *The Barrow S. B. Coy* Description and area of safety valves on each boiler ... *2 spring load = 15.9 area each*  
 When *1877* At *Barrow* No. of square feet of fire-grate surface in each boiler *63 ft.*  
 Working pressure *65 lbs.* Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *Yes*  
 Tested by hydraulic pressure to *130 lbs.*, Date *1st August* Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. .... *Yes*  
 Description of super-heating apparatus ..... *not any*  
 Can each boiler be worked separately *One boiler only*

**DONKEY BOILER.**

Description *Cyl'dr vertical cross tubed* Tested by hydraulic pressure to *100 lbs.*, Date *1st August*  
 Where fixed *In iron casing on U. S.* Description and area of safety valves *Same load = 3.9 area*  
 Working pressure *50 lbs.* No. of square feet of fire grate *14 ft*

**PIPES, COCKS, AND CONNECTIONS.**

Are all connections with the sea direct on the skin of the ship *Yes* What pipes are carried through the bunkers *Not any*  
 Are they Kingston valves or common cocks ... *Common cocks & chests* How are they protected *At this time new*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ..... *Yes* When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *Yes*  
 Are the discharge pipes above or below the deep water line *Level* Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Yes*  
 Are they each fitted with a discharge valve on the plating of the vessel *Yes* Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *Yes*

*James Humphrey* Manufacturer.  
 GENERAL MANAGER

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *"Glenamoox"* owned by *W. Johnston & Co. of Liverpool* of the Port of *Liverpool* of *586.70* Tons Register, and *100* Registered Horse Power, and that they have been carefully inspected and examined by me at *Barrow* and found to be at this date, viz., *5th Sept* 18*77* in good order and safe working condition.

Amount of Fee for Survey ... £ *5 : 0 : 0*  
 (Travelling Expenses, if any, £ *4 : 19 : 2*)

*J. G. Kinghorn*  
 Engineer Surveyor to Lloyd's Register of Shipping.

(1000/31/7/76.)

Recd Oct 1877  
*M.B.*