

19080 Iron

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Rec 23/8/77

Description *Compound Inverted Direct Acting*  
 Made by *James & George Thomson*  
 When 18 *77* At *Glasgow*  
 Diameter of cylinder *28" dia* Length of stroke *36"*  
 No. of revolutions per minute *40*  
 Point of cut off *2/3 stroke*  
 Diameter of screw shaft *9"*  
 Diameter of crank shaft journals *9"*  
 Diameter of screw, *not paddle wheel*  
 Pitch of screw *18 ft*  
 No. of blades, *four* Total surface *41 ft<sup>2</sup>*  
 No. of bilge pumps *two* and sizes *3" dia x 18" stroke*  
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*  
 No. of feed pumps *two* and sizes *4" dia x 18" stroke*  
 What gauges are there attached to the engines and boilers ... *Two steam and one compound*  
 Description and size of Donkey Pumps ... *Double acting 5 1/2 x 10" stroke*  
 Where do they pump from ... *from the sea bilge*  
 No. of bilge injections *one* and sizes *2 1/2"*  
 Are they connected to air, or circulating pumps *to circulating*  
 Is there a hand pump in the engine room *Hand pump*  
 Can it be worked by the main engines *from deck leading into stokehold*  
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*

### MAIN BOILERS.

Number *One* Description *Round Horizontal*  
 Made by *James & George Thomson*  
 When 18 *77* At *Glasgow*  
 Working pressure *70 lbs*  
 Tested by hydraulic pressure to *140 lbs*, Date *June 1877*  
 Description of super-heating apparatus *Round Vertical with single tube*  
 Can each boiler be worked separately

Can the super-heater be shut off and the boilers worked separately *no*  
 Description and area of safety valves on each boiler ... *Two Direct Spring each 21.6" area*  
 No. of square feet of fire-grate surface in each boiler *82 ft<sup>2</sup>*  
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *Yes*  
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. *Yes*

### DONKEY BOILER.

Description *Flat Sided Horizontal*  
 Where fixed *on Upper Deck*  
 Working pressure *42 lbs*

Tested by hydraulic pressure to *84 lbs*, Date *June 1877*  
 Description and area of safety valves *Two Direct Spring each 3.4" area*  
 No. of square feet of fire grate *14 ft<sup>2</sup>*

### PIPES, COCKS, AND CONNECTIONS.

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 stoke hold plates ... *The below off cox's under plates stokehold being surrounded by coal bunkers*  
 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*

What pipes are carried through the bunkers *no*  
 How are they protected  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *On ship previous to being launched*  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Yes*  
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *Yes*

*Pro: James & Geo: Thomson* Manufacturer.  
*J Grant*

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 *"Summerlee"* owned by *Walter Neilson & Others* of the Port of *Glasgow* of *833* Tons Register, and *120* Registered Horse Power, and that they have been carefully inspected and examined by me at *Glasgow* and found to be at this date, viz., *August 16<sup>th</sup> 1877* in good order and safe working condition.

Amount of Fee for Survey *Any* £ *6* : : : *paid*  
 (Travelling Expenses, if any, £ )

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