

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Description *Compound Reverted Direct Acting*  
 Made by *Messrs James & George Thomson*  
 When *1877* At *Glasgow*  
 Diameter of cylinder *18" & 32"* Length of stroke *24"*  
 No. of revolutions per minute *about 100*  
 Point of cut off \_\_\_\_\_  
 Diameter of screw shaft *6 1/4"*  
 Diameter of crank shaft journals *6 1/2"*  
 Diameter of screw, *on* ~~or~~ *paddle wheel* *4ft*  
 Pitch of screw *13ft*  
 No. of blades *four* Total surface *13ft*  
 No. of bilge pumps *One* and sizes *3 1/4" x 12" Stroke*  
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*  
 No. of feed pumps *One* and sizes *3 1/2" x 12" Stroke*  
 What gauges are there attached to the engines and boilers ... *One Steam One Pressure One Compound*  
 Description and size of Donkey Pumps ... *Double Acting 8" Stroke*  
 Where do they pump from ... *from the Sea & Bilge*  
 No. of bilge injections *None* and sizes \_\_\_\_\_  
 Are they connected to air, or circulating pumps \_\_\_\_\_  
 Is there a hand pump in the engine room *Donkey works by hand*  
 Can it be worked by the main engines *hand*  
 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 *1877* At *Glasgow*  
 Working pressure *90 lbs*  
 Tested by hydraulic pressure to *160 lbs*, Date *Mar 31st 1877*  
 Description of super-heating apparatus *None*  
 Can each boiler be worked separately \_\_\_\_\_

Can the super-heater be shut off and the boilers worked separately \_\_\_\_\_  
 Description and area of safety valves on each boiler *Two Direct Spring, each 8 sq in*  
 No. of square feet of fire-grate surface in each boiler *30ft*  
 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 *No Donkey Boiler*  
 Where fixed \_\_\_\_\_  
 Working pressure \_\_\_\_\_

Tested by hydraulic pressure to \_\_\_\_\_, Date \_\_\_\_\_  
 Description and area of safety valves \_\_\_\_\_  
 No. of square feet of fire grate \_\_\_\_\_

### 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 ... *Yes*  
 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 *None*  
 How are they protected \_\_\_\_\_  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *On ship's previous being landed*  
 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 *No Sluice, a Sluice door is fitted on bulkhead*

Messrs James & George 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 ~~Steel~~) Screw (or ~~Paddle~~) Steam Vessel *Elspeth* owned by *John Campbell Esq*  
 of the Port of *Glasgow* of *49 1/2* Tons Register, and *20* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *Glasgow & Salmuir*  
 and found to be at this date, viz., *June 4th* 18*77* in good order and safe working condition.

Amount of Fee for Survey ... £ *2.10* - paid  
 (Travelling Expenses, if any, £ *10/6* - )

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