

# LOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Description *Inverted*  
 Made by *London & Glasgow S.H.B. Co*  
 When 18 *65* At *Glasgow*  
 Diameter of cylinder *36* Length of stroke *30*  
 No. of revolutions per minute *62*  
 Point of cut off *Variable*  
 Diameter of screw shaft *8 1/2*  
 Diameter of crank shaft journals *8 1/2*  
 Diameter of screw, or of paddle wheel  
 Pitch of screw  
 No. of blades, *4* Total surface  
 No. of bilge pumps *2* and sizes *3 1/2 x 15*  
 Do they pump from each compartment *8 Room only*

Are all the bilge suction pipes fitted with roses *yes*  
 No. of feed pumps *2* and sizes *3 1/2 x 15*  
 What gauges are there attached to the engines and boilers ... *1 Vacuum to Engine*  
*1 Steam to Boiler*  
 Description and size of Donkey Pumps ... *Double Acting*  
 Where do they pump from ... *Tanks, Bilge and Sea*  
 No. of bilge injections *one* and sizes  
 Are they connected to air, or circulating pumps *Circulating*  
 Is there a hand pump in the engine room *yes*  
 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*

### MAIN BOILERS.

Number *One* Description *Cylindrical*  
 Made by *Hodge & Co*  
 When 18 *78* At *London*  
 Working pressure *140 lbs*  
 Tested by hydraulic pressure to *80 lbs*, Date  
 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 *Boiler and weight*  
*5" diameter*  
 No. of square feet of fire-grate surface in each boiler  
 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 *Vertical 3 cross tubes*  
 Where fixed *Stokehold*  
 Working pressure *30 lbs*

Tested by hydraulic pressure to, Date  
 Description and area of safety valves *10w, 1 Lever, each*  
 No. of square feet of fire grate *2 1/2 dia*  
*41.6 dia*

### 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 ... *Cocks & valves*  
 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 *lead*  
 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 *at this time*  
 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 tunnel*

Manufacturer.

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 *Cromwell* owned by *Gen J. Screw Col. Co*  
 of the Port of *London* of *565* Tons Register, and *90* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *London*  
 and found to be at this date, viz., *February* 18 *78* in good order and safe working condition.

Amount of Fee for Survey ... *£ 4:10:0* Red  
 (Travelling Expenses, if any, £ *9.4.18*)  
 (1000/31/776.)

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