

16182.

Iron

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Compound Inverted Direct Acting*
 Made by *S. E. M. & Co. Company (Lm)*
 When *March 1876* At *Sunderland*
 Diameter of cylinder *1-36 and 1-58* Length of stroke *45"*
 No. of revolutions per minute *About 60*
29 1/2 ins
 Diameter of screw shaft *11 3/4*
 Diameter of crank shaft journals *11 3/4*
 Diameter of screw, ~~or of paddle wheel~~ *15.6"*
 Pitch of screw *20.0*
 No. of blades, *4* Total surface *88 sq feet*
 No. of bilge pumps *2* and sizes *4" dia x 45" stroke Single Acting*
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *2* and sizes *4" dia x 45" stroke Single Acting*
 What gauges are there attached to the engines and boilers ... *5 Steam 1 Vacuum*
 Description and size of *2 2" Pump 4" dia x 6" stroke Double Acting*
 Donkey Pumps ... *2 2" Pump 5" dia x 9" stroke " "*
 Where do they pump from *Sea, Bilges & Ballast Tanks*
 No. of bilge injections *1* and sizes *4" dia*
 Are they connected to air, or circulating pumps *to Condensers*
 Is there a hand pump in the engine room *No. Donkey can be used as such*
 Can it be worked by the main engines *No*
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*

MAIN BOILERS.

Number *2* Description *Round Horizontal Multitubular*
 Made by *S. E. M. & Co. Company (Lm)*
 When *March 1876* At *Sunderland*
 Working pressure *70 lbs*
 Tested by hydraulic pressure to *140 lbs* Date *Feb. 1876*
 Description of super-heating apparatus *None*
 Can each boiler be worked separately *Yes*

Can the super-heater be shut off and the boilers worked separately *Yes*
 Description and area of safety valves on each boiler *Lever and weight. 1 on each boiler. Total area 31.8 sq in*
 No. of square feet of fire-grate surface in each boiler *50 sq ft*
 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. *Pipes and valves in holds not accessible when vessel is loaded*

DONKEY BOILER.

Description *Vertical water tubes in furnaces*
 Where fixed *In stokehold*
 Working pressure *45 lbs*

Tested by hydraulic pressure to *Reported to 90 lbs.* Date *Jan 1876*
 Description and area of safety valves *Lever and weight. 1 on boiler. Total area 31.8 sq in*
 No. of square feet of fire grate *144 sq feet*

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 ... *Common valves and 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 *None*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *Now*
 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*

For S. E. M. & Co. (Lm) 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 *"Suez"* owned by *Messrs Nelson, Austin & Co.* of the Port of *London* of *1390* Tons Register, and *250* Registered Horse Power, and that they have been carefully inspected and examined by me at *Low Walker on Tyne* and found to be at this date, viz., *1st April* 1876 in good order and safe working condition.

Survey fee £3.3-0

Certificate £5-0

£3-8-0

Received at ...

by *A. Young* 11/4/76.

James I. G. Ain
 Engineer Surveyor to Lloyd's Register of Shipping.