

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Inserted cyl, surface condensing*
 Made by *Palmer*
 When *1864* At *Sarnow*
 Diameter of cylinder *38"* Length of stroke *30"*
 No. of revolutions per minute *68*
 Point of cut off *—*
 Diameter of screw shaft *8"*
 Diameter of crank shaft journals *4 1/4"*
 Diameter of screw, or of paddle wheel *10 ft.*
 Pitch of screw *15 ft*
 No. of blades, *4* Total surface *—*
 No. of bilge pumps *2* and sizes *4 1/2" dia 15" stroke*
 Do they pump from each compartment *Engine Room only*

Are all the bilge suction pipes fitted with roses *Yes!*
 No. of feed pumps *2* and sizes *4 1/2" dia 15" stroke*
 What gauges are there attached to the engines and boilers ... *1 steam on Boiler, 1 on engines, 1 vacuum bitto*
 Description and size of Donkey Pumps ... *Boiler donkey 5" dia, 6" stroke, Tank donkey 8" dia 10" stroke, Boiler donkey from Bilge & Sea*
 Where do they pump from ... *Tank donkey from Bilge & Tanks*
 No. of bilge injections *1* and sizes *3 1/2"*
 Are they connected to air, or circulating pumps *circulating*
 Is there a hand pump in the engine room *No "donkey used"*
 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 *1* Description *Dry Bottom*
 Made by *Palmer*
 When *1871* At *Sarnow*
 Working pressure *35 lbs per sq. inch,*
 Tested by hydraulic pressure to *—*, Date *—*
 Description of super-heating apparatus *Annular & Vertical*
 Can each boiler be worked separately *No!*

Can the super-heater be shut off and the boilers worked separately *No!*
 Description and area of safety valves on each boiler *Two dead weight 39.2 sq. inches,*
 No. of square feet of fire-grate surface in each boiler *55 sq. feet,*
 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. *All except Tank discharge valve, ship-side & Tank filling cocks,*

DONKEY BOILER.

Description *No*
 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 *all except Tank filling-pipes*
 Are they Kingston valves or common cocks ... *1 Stop valve rest common-cocks,*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates *all except Boiler Blow-off and Ash cock*
 Are the discharge pipes above or below the deep water line *all except Tank discharge*
 Are they each fitted with a discharge valve on the plating of the vessel *Yes!*
 What pipes are carried through the bunkers *Tank discharge*
 How are they protected *Iron casing,*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *Stern tube Aug. 75, Screw and connections July 1876.*
 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 - Improb*

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 *"Tanfield"* owned by *J. Inwick & Son* of the Port of *London* of *587* Tons Register, and *71* Registered Horse Power, and that they have been carefully inspected and examined by me at *London* and found to be at this date, viz., *July 17th* 1876 in good order and safe working condition.

G. W. Mammell
 Engineer Surveyor to Lloyd's Register of Shipping.