

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rec 9/3/76

Description *Inverted Compound Surface Condensing*
 Made by *Messrs Thompson & Co.*
 When *Feb 1876* At *Newcastle.*
 Diameter of cylinder *30.56"* Length of stroke *33 inches*
 No. of revolutions per minute *about 60, or 65,*
 Point of cut off *5/8ths of stroke.*
 Diameter of screw shaft *9 1/4 inches & 8 3/4 in tunnel,*
 Diameter of crank shaft journals *9 1/2 inches.*
 Diameter of screw, or of paddle wheel *12 ft. 6 inches,*
 Pitch of screw *18 feet,*
 No. of blades, *4* Total surface *67 sq feet.*
 No. of bilge pumps *2* and sizes *3 dia. x 20 inches stroke.*
 Do they pump from each compartment *from engine room only.*

Are all the bilge suction pipes fitted with roses *yes,*
 No. of feed pumps *2* and sizes *3 dia. x 20 stroke,*
 What gauges are there attached to the engines and boilers ... *1 vacuum gauge on Condenser, 1 steam in engine room, 1 on each boiler,*
 Description and size of Donkey Pumps ... *one inverted double acting, 8 dia. x 10 stroke.*
 Where do they pump from ... *from ballast tanks, sea, bilges of fore and aft holds and engine room.*
 No. of bilge injections *one* and sizes *3 dia.*
 Are they connected to air, or circulating pumps *to Air pump.*
 Is there a hand pump in the engine room *no (Donkey can be 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 *2* Description *Cylindrical,*
 Made by *Messrs Thompson & Co.*
 When *Jan 1876* At *Newcastle.*
 Working pressure *65 lbs per sq inch,*
 Tested by hydraulic pressure to *130 lbs.*, Date *Jan 1/76,*
 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
 Description and area of safety valves on each boiler ... *Spring 2 off 3 1/2 dia. = area of 19.2 sq. inch*
 No. of square feet of fire-grate surface in each boiler *38 sq. feet.*
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *yes (both into 1 cock on ship's side)*
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. *yes, except rose of for donkey bilge.*

DONKEY BOILER.

Description *Vertical, with 2 water tubes in flame box.*
 Where fixed *between engine room & stokehold,*
 Working pressure *41 lbs per sq inch.*

I was present. *in A.*
 Tested by hydraulic pressure to *80 lbs per sq inch.*, Date *July 18 76*
 Description and area of safety valves *loaded direct = 15.9 area*
 No. of square feet of fire grate *9.6 area.*

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 stop 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 bunks *None, except donkey life & fire hold*
 How are they protected *wooden casing.*
 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, by shell cocks with only 1 port in plugs.*
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *Tunnel is watertight, and sluice door fitted.*

Thompson & Co Manufacturer. *without Donkey Boilers*

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 *"Falcon"* owned by *The General S. N. Coy.* of the Port of *London* of *300.69* Tons Register, and *130* Registered Horse Power, and that they have been carefully inspected and examined by me at *Low Walker in June* found to be at this date, viz., *February 18 76* in good order and safe working condition.

Survey fee *L. 3.3* Received at Shields
0.5 by *P. Young*
3.8.0 *7/3/76*

William Allison.
 Engineer Surveyor to Lloyd's Register of Shipping.