

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Description *Side Lever. Jet Condenser*  
 Made by *Messrs John Readhead & Co.*  
 When *March 1876* At *South Shields*  
 Diameter of cylinders *Two 40"* Length of stroke *5' 6"*  
 No. of revolutions per minute *About 40*  
 Point of cut off *About 1/2 stroke*  
 Diameter of ~~screw~~ *paddle* shaft *12 1/2"*  
 Diameter of crank shaft journals *11 1/2"*  
 Diameter of ~~screw~~, or of paddle wheel *21' 0"*  
~~Pitch of screw~~ *Patent floats 10 on each wheel 8' 0" x 2' 6"*  
 No. of blades, *2* Total surface *2*  
 No. of bilge pumps *2* and sizes *5' dia x 15 1/2" stroke. Single acting*  
 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 *7' dia x 15 1/2" stroke Single acting*  
 What gauges are there attached to the engines and boilers ... *1 Gauge on each boiler and 2 vacuum gauges*  
 Description and size of *Double acting pump*  
 Donkey Pumps ... *4 1/2" dia x 10" stroke*  
 Where do they pump *from bilge and sea*  
 from .....  
 No. of bilge injections *2* and sizes *2' dia*  
 Are they connected to air, or circulating pumps *to Condenser*  
 Is there a hand pump in the engine room *Yes. Double acting 4 1/2" x 10" stroke*  
 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 Multitubular*  
 Made by *Messrs John Readhead & Co*  
 When *March 1876* At *South Shields*  
 Working pressure *50 lbs*  
 Tested by hydraulic pressure to *Reported to 100 lbs* Date *Feb. 1876*  
 Description of ~~apparatus~~ *Steam Room* *Cylindrical, horizontal, receivers*  
 Can each boiler be worked separately *Yes*

Can the super-heater be shut off and the boilers worked separately *No superheater*  
 Description and area of safety valves on each boiler *Adams Spring. Two on each boiler Area 28.38 sq in.*  
 No. of square feet of fire-grate surface in each boiler *52 sq feet*  
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *Yes. Brine pipe above water line no cocks on vessels skin*  
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. *Yes*

### DONKEY BOILER.

Description *No donkey boiler on board*  
 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 ... *Common valves and cocks*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates *No. Portable latches fitted in flooring plates*  
 Are the discharge pipes above or below the deep water line *Above*  
 Are they each fitted with a discharge valve on the plating of the vessel *Yes. Donkey discharges through duct only, from bilge, not through Manufacturer. Ships Side*

What pipes are carried through the bunkers *One steam & two discharge.*  
 How are they protected *Strong iron casing*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *~*  
 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 *~*

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 *Flying Fish* owned by *Nelson Brothers & Co*  
 of the Port of *Liverpool* *91.53* Tons Register, and *180* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *South Shields*  
 and found to be at this date, viz., *29th March 1876* in good order and safe working condition.

Survey fee *£3.3-0*  
 Certificate *5-0* Received at *Shields*  
*£3-8-0* by *T. Young*  
*15/4/76.*

*James Bain*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 Foundation

IRON 465-0498