

# REPORT ON MACHINERY.

No. *143* Received at London Office *MONDAY 27 JUNE 1887*  
 No. in Survey held at *Barrow* Date, first Survey *22nd July 86* Last Survey *14th June 1887*  
 Reg. Book. on the *S.S. Bagelgette* (Number of Visits *83*)  
 Master *James Bennett* Built at *Barrow* By whom built *Barrow Ship Bldg Co. Ltd* When built *1884*  
 Engines made at *Barrow* By whom made *"* when made *1884*  
 Boilers made at *"* By whom made *"* when made *1884*  
 Registered Horse Power *170* Owners *Metropolitan Board of Works.* Port belonging to *London.*

## ENGINES, &c.—

Description of Engines *Wm. Lewis Triple Expansion, Three Cranks.*  
 Diameter of Cylinders *15, 22 - 33* Length of Stroke *24* No. of Rev. per minute *"* Point of Cut off, High Pressure *1/2 S.* Low Pressure *1/2 S.*  
 Diameter of Screw shaft *7"* Diam. of Tunnel shaft *6 3/8"* Diam. of Crank shaft journals *7"* Diam. of Crank pin *7 1/2"* size of Crank webs *14 1/2 x 8"*  
 Diameter of screw *8 - 8"* Pitch of screw *11 - 6"* No. of blades *4* state whether moveable *not* total surface *30.2 sq ft.*  
 To. of Feed pumps *One* diameter of ditto *2 1/2"* Stroke *12"* Can one be overhauled while the other is at work *"*  
 To. of Bilge pumps *One* diameter of ditto *2 1/2"* Stroke *12"* Can one be overhauled while the other is at work *"*  
 Where do they pump from *Engine room, fore and after compartments and after well.*  
 To. of Donkey Engines *Two* Size of Pumps *10" dia. & 10" stroke double pump.* Where do they pump from *Large pump from sea, bilges and*  
*running tank, small pump from sea and bilges.*  
 Are all the bilge suction pipes fitted with roses *yes* Are the roses always accessible *yes* Are the sluices on Engine room bulkheads always accessible *"*  
 To. of bilge *injections* *one* and sizes *5" dia.* Are they connected to condenser, or to circulating pump *to special pump*  
 How are the pumps worked *by levers from Piston-rod crosshead of Intermediate Engine. Special Cing. Pump*  
 Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *both valves and cocks.*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *yes* Are the discharge pipes above or below the deep water line *"*  
 Are they each fitted with a discharge valve always accessible on the plating of the vessel *yes* Are the blow off cocks fitted with a spigot and brass covering plate *"*  
 That pipes are carried through the bunkers *none* How are they protected *"*  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times *yes*  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *yes*  
 When were stern tube, propeller, screw shaft, and all connections examined *in dry dock before launching.*  
 Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *top platform.*

## BOILERS, &c.—

Number of Boilers *Two* Description *Cylindrical Multitubular* Whether Steel or Iron *Steel*  
 Working Pressure *150 lbs* Tested by hydraulic pressure to *200* Date of test *18th March 1887.*  
 Description of superheating apparatus or steam chest *none fitted.*  
 Can each boiler be worked separately *yes* Can the superheater be shut off and the boiler worked separately *"*  
 No. of square feet of fire grate surface in each boiler *40* Description of safety valves *Spring* No. to each boiler *Two.*  
 Area of each valve *3" dia.* Are they fitted with easing gear *yes* No. of safety valves to superheater *"* area of each valve *"*  
 Are they fitted with easing gear *"* Smallest distance between boilers and bunkers or woodwork *"* Diameter of boilers *11 - 0"*  
 Length of boilers *10 - 3"* description of riveting of shell long. seams *lap, reb. rivet* circum. seams *"* end *"* Thickness of shell plates *1"*  
 Diameter of rivet holes *1/8"* whether punched or drilled *drilled* pitch of rivets *6 1/4 x 3/8"* Lap of plating *Butt joint 1 1/2 wide.*  
 Percentage of strength of longitudinal joint *82%* working pressure of shell by rules *161.5 lbs* size of manholes in shell *16 x 12"*  
 Size of compensating rings *28 x 24 x 1"* No. of Furnaces in each boiler *Two*  
 Outside diameter *3 - 8 1/2"* length, top *7 - 0"* bottom *7 - 0"* thickness of plates *9/16"* description of joint *Corrugated* if rings are fitted *"*  
 Greatest length between rings *"* working pressure of furnace by the rules *188.6 lbs* combustion chamber plating, thickness, sides *9/16"* back *9/16"* top *9/16"*  
 Thickness of stays to ditto, sides *8 x 8* back *8 x 8* top *8 x 8* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *57.5 lbs*  
 Diameter of stays at smallest part *1.259* working pressure of ditto by rules *53.7 lbs* end plates in steam space, thickness *2 3/32"*  
 How stays are secured *double nut & rivet washer* working pressure by rules *146 lbs* diameter of stays at smallest part *2 1/4"*  
 Working pressure by rules *59.2 lbs* Front plates at bottom, thickness *3/4"* Back plates, thickness *9/16"*  
 Test pitch of stays *"* working pressure by rules *"* Diameter of tubes *3 1/2"* pitch of tubes *4 5/8"* thickness of tube plates, front *3/4"* back *3/4"*  
 How stayed *Stay tube, pitch of stays 13 3/8 x 9 1/4"* width of water spaces *1/8"*  
 Diameter of Superheater or Steam chest *"* length *"* thickness of plates *"* description of longitudinal joint *"* diam. of rivet holes *"*  
 Working pressure of shell by rules *"* diameter of flue *"* thickness of plates *"* If stiffened with rings *"*  
 Working pressure by rules *"* end plates of superheater, or steam chest; thickness *"* how stayed *"*  
 Superheater or steam chest; how connected to boiler *"*



**DONKEY BOILER—** Description *None.*

Made at \_\_\_\_\_ by whom made \_\_\_\_\_ when made \_\_\_\_\_ where fixed \_\_\_\_\_  
 Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ fire grate area \_\_\_\_\_ description of sa \_\_\_\_\_  
 valves \_\_\_\_\_ No. of safety valves \_\_\_\_\_ area of each \_\_\_\_\_ if fitted with easing gear \_\_\_\_\_ if steam from main boilers \_\_\_\_\_  
 enter the donkey boiler \_\_\_\_\_ diameter of donkey boiler \_\_\_\_\_ length \_\_\_\_\_ description of riveting \_\_\_\_\_  
 Thickness of shell plates \_\_\_\_\_ diameter of rivet holes \_\_\_\_\_ whether punched or drilled \_\_\_\_\_ pitch of rivets \_\_\_\_\_ lap of plates \_\_\_\_\_  
 per centage of strength of joint \_\_\_\_\_ thickness of crown plates \_\_\_\_\_ stayed by \_\_\_\_\_  
 Diameter of furnace, top \_\_\_\_\_ bottom \_\_\_\_\_ length of furnace \_\_\_\_\_ thickness of plates \_\_\_\_\_ description of joint \_\_\_\_\_  
 Thickness of furnace crown plates \_\_\_\_\_ stayed by \_\_\_\_\_ working pressure of shell by \_\_\_\_\_  
 Working pressure of furnace by rules \_\_\_\_\_ diameter of uptake \_\_\_\_\_ thickness of plates \_\_\_\_\_ thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— *Vessel for river service, spare gear not supplied*

The foregoing is a correct description,

*John* Manufacturer.

**General Remarks** (State quality of workmanship, opinions as to class, &c.)

The machinery and Boilers of this vessel have been constructed under special survey. Material and Workmanship good and satisfactory. Engines and Boilers as above described are in good order and satisfactory condition and, in my opinion, eligible to have the notification MC, 6-87, recorded in the Society's Register Book.

The amount of Entry Fee .. £ 2 : - : - received by me, }  
 Special .. £ 1/8 : - : - }  
 Donkey Boiler Fee .. £ : - : - }  
 Certificate (if required) .. £ : - : - } 25/6/1887  
 To be sent as per margin.

Travelling Expenses, if any, £ ..

Committee's Minute

TUESDAY 28 JUNE 1887

*D. Ritchie*

Engineer Surveyor to Lloyd's Register of British & Foreign