

# REPORT ON MACHINERY. 7334

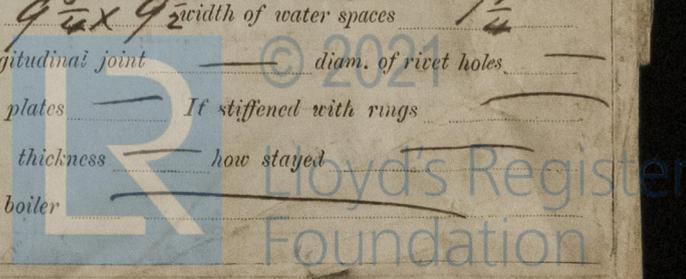
No. 7334 Port of West Hartlepool Received at London Office 9 MAR. 89  
 No. in Survey held at Stockton Date, first Survey 24<sup>th</sup> Sept. 2 Last Survey 4<sup>th</sup> March 1889  
 Reg. Book. on the Scier Steamer "Ataka" (Number of Visits 27) Tons 3650  
 Master F. Newell Built at Stockton By whom built Messrs. Popner & Sons When built 1889  
 Engines made at Stockton By whom made Messrs. Blair & Co. Ltd when made 1889  
 Boilers made at Stockton By whom made Messrs. Blair & Co. Ltd when made 1889  
 Registered Horse Power 495 Owners J. M. Wood Port belonging to Liverpool  
 Manufacturers " " 390

## ENGINES, &c.—

Description of Engines Inverted, Triple Expansion, 3 Cylinders & 3 Cranks.  
 Diameter of Cylinders 28", 46", 75" Length of Stroke 54" No. of Rev. per minute 56 Point of Cut off, High Pressure 1/2 stroke Low Pressure 1/2 stroke  
 Diameter of Screw shaft 16 1/4" Diam. of Tunnel shaft 15 1/4" Diam. of Crank shaft journals 16" Diam. of Crank pin 16 1/2" size of Crank webs 21 3/4" x 10 3/4"  
 Diameter of screw 19.0" Pitch of screw 20.0" No. of blades 4 state whether moveable yes total surface 95 sq. ft.  
 No. of Feed pumps 2 diameter of ditto 3 1/2" Stroke 36" Can one be overhauled while the other is at work yes.  
 No. of Bilge pumps 2 diameter of ditto 5" Stroke 36" Can one be overhauled while the other is at work yes.  
 Where do they pump from For. & main holds, after well, sea, & tanks  
 No. of Donkey Engines 2 Size of Pumps (9" x 10") (5" x 8") Where do they pump from (Ballast tanks, sea, & all bilges) (Sea, hotwell, & tanks)  
 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 yes  
 No. of bilge injections one and sizes 1/2 dia Are they connected to condenser, or to circulating pump Circulating pump.  
 How are the pumps worked By levers from the after piston rod crosshead.  
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both  
 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 above  
 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 yes  
 What 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 18<sup>th</sup> January 1889.  
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Top platform of engine room.

## BOILERS, &c.—

Number of Boilers Two Description Cyl. mult. Double ended Whether Steel or Iron Steel  
 Working Pressure 170 lbs. Tested by hydraulic pressure to 340 lbs. Date of test 24<sup>th</sup> Jan 1889.  
 Description of superheating apparatus or steam chest none  
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no superheater  
 No. of square feet of fire grate surface in each boiler 89.5 Description of safety valves Spring No. to each boiler 2  
 Area of each valve 11.04 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 on woodwork 12" Diameter of boilers 14. 2 3/8"  
 Length of boilers 17.0" description of riveting of shell long. seams double butt strap circum. seams treble riv lap Thickness of shell plates 1 5/16"  
 Diameter of rivet holes 1 5/16" whether punched or drilled drilled pitch of rivets 2 in 8 3/4" 2 in 4 3/8" Lap of plating 9 7/16"  
 Percentage of strength of longitudinal joint 85 working pressure of shell by rules 170 lbs. size of manholes in shell 16" x 12"  
 Size of compensating rings 28" x 24" x 1 5/16" No. of Furnaces in each boiler 6  
 Outside diameter 3.2" length, top 6.3" bottom 6.3" thickness of plates corrugated 35/64 description of joint welded if rings are fitted no  
 Greatest length between rings — working pressure of furnace by the rules 177 lbs. combustion chamber plating, thickness, sides 9/16" back — top 9/16"  
 Pitch of stays to ditto, sides 1/2" x 7" back — top 1/2" x 7" if stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 172 lbs.  
 Diameter of stays at smallest part 1 5/16" working pressure of ditto by rules 192 lbs. end plates in steam space, thickness 1 1/8"  
 Pitch of stays to ditto 16" x 15" how stays are secured double nut & washers working pressure by rules 177 lbs. diameter of stays at smallest part 2 1/2"  
 working pressure by rules 184 lbs. Front plates at bottom, thickness 1 5/16" Back plates, thickness —  
 Greatest pitch of stays — working pressure by rules — Diameter of tubes 3 1/2" pitch of tubes 4 7/8" x 4 3/4" thickness of tube plates, front 1 1/16" back 1/8" how stayed stay tube pitch of stays 9 3/4" x 9 1/2" width of water spaces 1 1/4"  
 Diameter of Superheater or Steam chest — length — thickness of plates — description of longitudinal joint — diam. of rivet holes —  
 Pitch of rivets — working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with rings —  
 Distance between 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 *Vertical, Meredith's patent, Steel*  
 Made at *Stockton* by whom made *Messrs Riley Bros* when made *26.1.89* where fixed *In stockhole*  
 Working pressure *80lb.* tested by hydraulic pressure to *160lb.* No. of Certificate *1728* fire grate area *20 sq. ft.* description of safety  
 valves *Spring* No. of safety valves *one* area of each *12.56* if fitted with easing gear *yes* if steam from main boilers can  
 enter the donkey boiler *no* diameter of donkey boiler *6.3"* length *13.0"* description of riveting *double riv? lap.*  
 Thickness of shell plates *13/32"* diameter of rivet holes *13/16"* whether punched or drilled *punched* pitch of rivets *2 13/16"* lap of plating *4 1/2"*  
 per centage of strength of joint *71* thickness of crown plates *13/32"* stayed by *Hemispherical*  
 Diameter of furnace, top *4.6"* bottom *5.4"* length of furnace *2.6"* thickness of plates *9/16"* description of joint *single riv? lap*  
 Thickness of furnace crown plates *9/16"* stayed by *Hemispherical* working pressure of shell by rules *82 lb.*  
 Working pressure of furnace by rules *83 lb.* diameter of uptake *—* thickness of plates *—* thickness of water tubes *—*

**SPARE GEAR.** State the articles supplied:— *2 Piston blades, A set of bolts & nuts for a connecting  
 rod, main bearing, & shaft coupling. A set of valves for a feed pump,  
 bilge pump, air pump & circulating pump. A set of springs for H. & D. P.  
 pistons, One cylinder escape valve spring, 2 safety valve springs. 300 bolts & nuts  
 ass? Iron assorted.*  
 The foregoing is a correct description,  
 Manufacturer. *J. Bonchetti & Co. of engines & main boilers*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*Main steam pipes tested by hydraulic pressure to 340 lb. per square  
 inch and found tight.  
 The engines and boilers of this vessel have been constructed  
 under Special Survey, and of a good quality of  
 workmanship, they have been tried under steam, the  
 safety valves adjusted, and found to work well and are  
 in my opinion, safe and efficient working condition and eligible,  
 to have the certification **L.M.C. 3.89.**  
 recorded in the Register Book of this Society.*

*200*

*It is submitted that  
 this vessel is eligible to have  
 + L.M.C. 3.89 recorded*

*A.H.D.  
 9.3.89.*

The amount of Entry Fee £ *3 : 0 : 0* received by me,  
 Special *44 : 15 : 0*  
 Donkey Boiler Fee .. £ : :  
 Certificate (if required) .. £ : : *43 18 9*  
 (To be sent as per margin.)  
 (Travelling Expenses, if any, £ ..)

*A. Stoddart*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **TUES 12 MARCH 1889**  
*+ L.M.C. 3/89*

