

REPORT ON MACHINERY. 4731

Survey held at Hartlepool West Hartlepool Date, first Survey 25th May Last Survey 14th October 1881
 Book. "Rocklands" Tons 603
 on the "Rocklands"
 ter Cott Built at Hartlepool When built 1881 9th mo
 ines made at Hartlepool By whom made W. Richardson & Son when made 1881 9th mo
 ilers made at " By whom made " when made 1881 9th mo
 igned Horse Power 99 Owners Hendy, Wilson & Co Port belonging to H. H. P. O.

GINES, &c.—

Description of Engines Compound, Horizontal, Vertical, Condensing.
 Diameter of Cylinders 27 and 50 Length of Stroke 33 No. of Rev. per minute about 65 Point of Cut off, High Pressure about 1/2 P. Low Pressure about 1/2 P.
 Diameter of Screw shaft 8 1/2 Diameter of Tunnel shaft 8 Diameter of Crank shaft journals 8 1/2 Diameter of Crank pin 9 size of Crank webs 6 x 9 1/2
 Diameter of screw 13-0 Pitch of screw 15-6 No. of blades 4 state whether moveable not total surface 52.72 sq feet.
 No. of Feed pump Two diameter of ditto 3 1/4 Stroke 23 Can one be overhauled while the other is at work yes
 No. of Bilge pump Two diameter of ditto 3 1/4 Stroke 23 Can one be overhauled while the other is at work yes
 Where do they pump from Engine Room Fore peak and after well.
 No. of Donkey Engines Two Description Size of Pumps 3 1/2 dia x 7 1/2 stroke Where do they pump from large donkey engine pumps
ballast tanks & engine room. Small do from Sea, hot well, engine room, Fore peak & after well.
 Are the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes
 injections Two and sizes 3/4 dia Are they connected to condenser, or to circulating pump to Circulating Pump.
 pumps worked by Lewis connected to piston rod Crushead of low-pressure engine.
 tions with the sea direct on the skin of the ship yes Are they Valves or Cocks both Valves & Cocks
 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 below
 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
 are carried through the bunkers True How are they protected "
 pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes
 pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes
 were stern tube, propeller, screw shafts and all connections examined in dry dock New Vessel.
 the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from 4th platform of engine room.

ILERS, &c.—

Number of Boilers One Description Cylindrical Multi-tubular
 Working Pressure 75 lbs Tested by hydraulic pressure to 150 lbs Date of test 28/9/81
 Description of superheating apparatus or steam chest Vertical dome.
 Can each boiler be worked separately " Can the superheater be shut off and the boiler worked separately No Superheater
 No. of square feet of fire grate surface in each boiler 13.7 Description of safety valves Spring made by J. Richardson & Son
 No. to each boiler Two area of each valve 15.0317 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 22
 Diameter of boilers 13-2 Length of boilers 10 feet Description of riveting of shell long. seams DB. Phap, DR. Riv. circum. seams lap. DR. Riv.
 Thickness of shell plates 25/32 diameter of rivet holes 1/8 whether punched or drilled drilled pitch of rivets 5/8
 Lap of plating 3 per centage of strength of longitudinal joint 78.04 Working pressure of shell by rules 77.1 lbs
 Size of manholes in shell 11 x 15 size of compensating rings 27 x 30 x 13/16
 No. of Furnaces in each boiler Three outside diameter 3-3 length, top 6-3 bottom 9-3
 Thickness of plates 15/32 description of joint lap. doub. rivet if rings are fitted yes greatest length between rings 6-3
 Working pressure of furnace by the rules 80.7 lbs
 Combustion chamber plating, thickness, sides 7/16 back 7/16 top 7/16
 Pitch of stays to ditto " sides 7 x 7 1/4 back 7 1/4 x 7 1/2 top 7 7/8 x 7 7/8
 If stays are fitted with nuts or riveted heads 2 1/4 nuts & other provisions heads working pressure of plating by rules 79 lbs
 Diameter of stays at smallest part 1/8 working pressure of ditto by rules 96.2 lbs
 End plates in steam space, thickness 13/16 pitch of stays to ditto 16 x 17 how stays are secured nuts & washers
 Working pressure by rules 87.8 lbs diameter of stays at smallest part 2 1/4 working pressure by rules 87.7 lbs
 Front plates at bottom, thickness 1/16 Back plates, thickness 3/4 greatest pitch of stays about 11 working pressure by rules 100 lbs

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Diameter of tubes $3\frac{1}{4}$ pitch of tubes $4\frac{1}{2} \times 4\frac{1}{2}$ thickness of tube plates, front $\frac{1}{16}$ back $\frac{1}{16}$
 How stayed *Stay tubes* pitch of stays $9 \times 13\frac{1}{4}$ width of water spaces $1\frac{1}{4}$
 Diameter of ~~Superheater or~~ Steam chest $3'-0"$ length $6'-6"$
 Thickness of plates $\frac{7}{16}$ description of longitudinal joint *lap rivet* diameter of rivet holes $\frac{7}{16}$ pitch of rivets $2\frac{1}{16}$
 Working pressure of shell by rules $128\frac{1}{2}$ lb Diameter of flue \rightarrow thickness of plates \rightarrow

If stiffened with rings \rightarrow distance between rings \rightarrow Working pressure by rules \rightarrow

End plates of superheater, or steam chest; thickness $\frac{1}{4}$ How stayed *Dished ends*

Superheater or steam chest; how connected to boiler *by angle ironing 4 x 4 x $\frac{5}{8}$. Single riveted.*

DONKEY BOILER— Description *Cylindrical vertical with Fairbairn. (1 Boiler)*

Made at *Hotchkiss & Sons* By whom made *Riley Bros* when made *Tested 6th August 1881*

Where fixed *in Hotchkiss* working pressure *60 lb* Tested by hydraulic pressure to *170 lb* No. of Certificate *5*

Fire grate area *12.56 - sq ft* Description of safety valves *Direct steam* No. of safety valves *Two* area of each *4.431*

If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no*

Diameter of donkey boiler $5'-0"$ length $11'-6"$ description of riveting *lap, double riveted*

thickness of shell plates $\frac{3}{8}$ diameter of rivet holes $\frac{13}{16}$ whether punched or drilled *punched*

pitch of rivets $2\frac{3}{4}$ lap of plating $4\frac{1}{4}$ per centage of strength of joint 70.4

thickness of crown plates $\frac{7}{16}$ stayed by *5 stays each $1\frac{1}{2}$ effective diameter*

Diameter of furnace, top $4'-0"$ bottom $4'-6"$ length of furnace $4'-5"$

thickness of plates $\frac{13}{32}$ description of joint *lap, single riveted*

thickness of furnace crown plates $\frac{7}{16}$ stayed by *5 stays each $1\frac{1}{2}$ effective diameter*

Working pressure of shell by rules *68 lb* working pressure of furnace by rules *63.7 lb*

diameter of uptake $13"$ thickness of plates $\frac{3}{8}$ thickness of water tubes $\frac{3}{8}$

The foregoing is a correct description,

Hotchkiss & Sons Manufacturers of Machinery and Boilers

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

Material and Workmanship good.

The Machinery and Boilers of this vessel are in good and safe working condition and in my opinion, eligible for certification ✠ Lloyd's M.C. in the Register Book.

This is submitted that this vessel is eligible to have the notation & Lloyd's M.C. recorded on 24/10/81

The amount of Entry Fee .. £ 2 : : : received by me,

Special *1/11* .. £ 14 : 17 : : *MC*

Certificate (if required) .. £ : : : 20.10.1881

(Travelling Expenses, if any, £)

Committee's Minute

Tuesday, October 25th 1881.

Lloyd's M.C.

Robert Edmund Taylor & Son, Printers, 29, Old Street, Goswell Road, London, E.C.

Museum of the Register
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.