

REPORT ON MACHINERY.

28682

No. 399

(Received in London Office)

20/12/80

No. in Survey held at Hartlepool & Middlesbrough Date, first Survey 30th July Last Survey 11th Decr 1880

eg. Book.

on the S.S. 'Montgomeryshire'

Tons

1929
1257

Master Built at Middlesbrough When built 1880

Engines made at Hartlepool By whom made J. Richardson & Co. when made 1880

Boilers made at By whom made when made 1880

Registered Horse Power 250 Owners Jenkins & Co. Port belonging to Fudm.

ENGINES, &c.—

Description of Engines Compound Inverted Surface Condensing.
 Diameter of Cylinders 36 & 69 Length of Stroke 36 No. of Rev. per minute 66.5 Point of Cut off, High Pressure about 1/2 stroke Low Pressure about 1/2 stroke
 Diameter of Screw shaft 11 Diameter of Tunnel shaft 10 1/2 Diameter of Crank shaft journals 11 Diameter of Crank pin 12 size of Crank webs 7 & 13
 Diameter of screw 15 1/2 - 3 Pitch of screw 17 - 0 No. of blades 4 state whether moveable not total surface 70.5 sq. ft.
 No. of Feed pumps 2 diameter of ditto 3 3/4 Stroke 27 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 diameter of ditto 3 3/4 Stroke 27 Can one be overhauled while the other is at work yes
 Where do they pump from Engine room (3 Pumps) Fore hold and after well
 No. of Donkey Engines 2 Size of Pumps 7 1/2 & 9 Where do they pump from Large donkey engine pumps from Ballast Tanks & Engine room. Small do from Sea Hot well Engine room, Fore hold and after well
 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 1 and sizes 4 & 2 Are they connected to condenser, or to circulating pump to circulating pump
 How are the pumps worked by Lewis Links &c. Connected to cross head of two pressure piston rod.
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks 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 below
 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 new
 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 2 Description Cylindrical, Multi-tubular, Fixed fire, for'd ends.
 Working Pressure 75 lb Tested by hydraulic pressure to 150 lb Date of test 11-11-80
 Description of ~~superheating apparatus~~ on steam chest Vertical drum Conical ends.
 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 47 1/4 sq. ft. Description of safety valves Spring, made by Richardson & Co.
 No. to each boiler 2 area of each valve 15.03 sq. in. 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 10
 Diameter of boilers 12-10 Length of boilers 10-0 description of riveting of shell long. seams Double Riv'd circum. seams Long Riv'd
 Thickness of shell plates 25/32 diameter of rivet holes 1 1/8 whether punched or drilled drilled in pitch of rivets
 Lap of plating 4 1/2 x 5 per centage of strength of longitudinal joint 77.5 working pressure of shell by rules 78.6 lb
 Size of manholes in ends 11 1/4 x 15 size of compensating rings 24 x 30 x 25/32
 No. of Furnaces in each boiler 3 outside diameter 36 7/8 length, top 6-3 bottom 9-4
 Thickness of plates 7/16 description of joint Long Double Riv'd if rings are fitted Bottom plates Riv'd by T. H. H. H. H. greatest length between rings 6-3
 Working pressure of furnace by the rules 74.4 lb
 Combustion chamber plating, thickness, sides 7/16 back 7/16 top 7/16
 Pitch of stays to ditto sides 7 3/8 x 7 5/8 back 7 3/8 x 7 5/8 top 8 1/4 x 8 1/4
 If stays are fitted with nuts or riveted head Yes, often Riv'd heads. working pressure of plating by rules 76 lb
 Diameter of stays at smallest part 1 1/8 working pressure of ditto by rules 87.3 lb
 End plates in steam space, thickness 13/16 pitch of stays to ditto 17 3/4 x 17 3/4 how stays are secured Nuts & washers at & inside
 Working pressure by rules 75 lb diameter of stays at smallest part 2 1/4 working pressure by rules 75.8 lb
 Front plates at bottom, thickness 7/16 Back plates, thickness 3/4 greatest pitch of stays Guaranteed working pressure by rules


IRON 497-0238

28682 Iron

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 $9 \times 13\frac{1}{2}$ 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 double Riv diameter of rivet holes $\frac{7}{16}$ pitch of rivets $2\frac{9}{16}$
Working pressure of shell by rules $128\frac{1}{2}$ lb 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 $\frac{1}{2}$ How stayed Conical ends.
Superheater or steam chest; how connected to boiler by angle iron ring, $4 \times 4 \times \frac{5}{8}$ - single riveted.
DONKEY BOILER - Description Cylindrical Vertical with Fire box
Made at Middlesbrough By whom made R Dixon & Co when made 1880 - 10th Dec
Where fixed in Stockhold working pressure 65 lb Tested by hydraulic pressure to 140 lb No. of Certificate 447
Fire grate area 23.5 sq ft Description of safety valves direct steam No. of safety valves 2 area of each 7.068 x 4.9
If fitted with easing gear yes If steam from main boilers can enter the donkey boiler No
Diameter of donkey boiler $6-6$ length $12-6$ description of riveting Aug. Boltons Double Riv. Lap Riv.
thickness of shell plates $\frac{9}{16}$ diameter of rivet holes $\frac{7}{8}$ whether punched or drilled punched
pitch of rivets 3 lap of plating $4\frac{1}{4}$ per centage of strength of joint 70.8
thickness of crown plates $\frac{5}{8}$ stayed by 6 stays each 2" effective diam also by uptake.
Diameter of furnace, top $5-0$ bottom $6-0$ length of furnace $6-0$
thickness of plates $\frac{5}{8}$ description of joint Lap Single riveted
thickness of furnace crown plates $\frac{5}{8}$ stayed by 6 stays each 2" diam also by uptake.
Working pressure of shell by rules 84 lb working pressure of furnace by rules 75-75 lb
diameter of uptake 13 thickness of plates $\frac{3}{8}$ thickness of water tubes $\frac{3}{8}$

The foregoing is a correct description,
J. H. Richardson & Son Manufacturers of Marine Engines 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 order and safe working condition and in my opinion eligible for the Intification  Lloyd's M.C. in the Register-Books

The Machinery of this vessel has been built and fitted in accordance with the rules under special survey. That she is eligible to have Lloyd's M.C. 12-80
M 20-12-8

The amount of Entry Fee £ 3 : : : received by me,
Special .. £ 32 : 10 : :
Certificate (if required) .. £ : : 5 : : 18-12-1880.
To be sent as per margin
Travelling Expenses, if any, £ 2 : 2 : :
Committee's Minute

Tuesday, December, 21st 1880.

Quincy Ritchie
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Lloyd's Register Foundation