

REPORT ON MACHINERY.

No. 5391

(Received in London Office 30/3/81)

No. in Survey held at Paisley
Reg. Book.

Date, first Survey Aug 1/80 Last Survey 25th May 1881

on the S. S. "Amitie"

Tons 695.29
442.23

Master John Courpon Built at Paisley When built 1881

Engines made at Paisley By whom made Heming & Ferguson when made 1881

Boilers made at Paisley By whom made Heming & Ferguson when made 1881

Registered Horse Power 85 Owners Coubet Port belonging to Bayonne

ENGINES, &c.—

Description of Engines Compound Inverted Direct acting
 Diameter of Cylinders 23" & 45" Length of Stroke 33" No. of Rev. per minute _____ Point of Cut off, High Pressure 7/8" Low Pressure 7/8"
 Diameter of Screw shaft 8" Diameter of Tunnel shaft 7 1/2" Diameter of Crank shaft journals 8" Diameter of Crank pin 8" size of Crank webs 1 1/2" x 6"
 Diameter of screw 11-6" Pitch of screw 14-6" No. of blades 4 state whether moveable yes total surface 36 sq ft
 No. of Feed pumps two diameter of ditto 2 7/8" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps two diameter of ditto 3 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 Where do they pump from Fore and After Holds & Eng. Room Gutter.
 No. of Donkey Engines one Size of Pumps 3 3/4" x 10" Stroke Where do they pump from Fore and after Holds
Eng. Bilge tank & Sea
 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 Partly in hold
 No. of bilge injections one and sizes 2 1/2" dia Are they connected to condenser, or to circulating pump on sea chest.
 How are the pumps worked by levers
 Are all connections with the sea direct on the skin of the ship one saddle piece 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 before launching.
 Is the screw shaft tunnel watertight stepped and fitted with a sluice door yes worked from top platform

BOILERS, &c.—

Number of Boilers one Description Cylindrical, Single ended (Internal Steel)
 Working Pressure 75 lbs Tested by hydraulic pressure to 150 lbs Date of test 12/4/81
 Description of superheating apparatus or steam chest Cylindrical horizontal
 Can each boiler be worked separately ✓ Can the superheater be shut off and the boiler worked separately ✓
 No. of square feet of fire grate surface in each boiler 54 Description of safety valves direct spring
 No. to each boiler two area of each valve 15.9 valve Are they fitted with casing gear yes
14.19 seat
 No. of safety valves to superheater ✓ area of each valve ✓ are they fitted with casing gear ✓
 Smallest distance between boilers and bunkers 9"
 Diameter of boilers 12-6" Length of boilers 9-7 1/2" description of riveting of shell long. seams lap, treble circum. seams lap, double
 Thickness of shell plates 5/16" diameter of rivet holes 1 1/8" whether punched or drilled punched pitch of rivets 4 1/2"
 Lap of plating 6 1/2" per centage of strength of longitudinal joint 70% working pressure of shell by rules 75 lbs
 Size of manholes in shell 16 1/2" x 13" size of compensating rings 5" x 7/8"
 No. of Furnaces in each boiler three outside diameter 39" length, top 6-3" bottom 8-6"
 Thickness of plates 1/2" Steel description of joint double butt if rings are fitted L on bottom greatest length between rings 6-0"
 Working pressure of furnace by the rules 93 lbs
 Combustion chamber plating, thickness, sides 1/2" Steel back 1/2" Steel top 1/2" Steel
 Pitch of stays to ditto sides 8 1/4" x 8 1/4" back 8 1/4" x 8 1/4" top 9" x 9"
 If stays are fitted with nuts or riveted heads riveted working pressure of plating by rules 94 & 79 lbs
 Diameter of stays at smallest part 1 1/4" Screwed wide rows of working pressure of ditto by rules 80 lbs
 End plates in steam space, thickness 3/4" pitch of stays to ditto 16" x 15" how stays are secured nuts & washers
 Working pressure by rules 78 lbs diameter of stays at smallest part 2 1/4" working pressure by rules 83 lbs
 Front plates at bottom, thickness 3/4" Back plates, thickness 3/4" greatest pitch of stays 13 1/2" working pressure by rules 80 lbs

Diameter of tubes $3\frac{1}{4}$ " *incl.* pitch of tubes $4\frac{3}{4}$ " thickness of tube plates, front $3\frac{1}{4}$ " back $3\frac{1}{8}$ "
 How stayed *stay tube* pitch of stays $14\frac{1}{4}$ " x $14\frac{1}{4}$ " width of water spaces $1\frac{1}{4}$ "
 Diameter of Superheater or Steam chest 30 " length $5\text{'}-6$ " 5391 *gls.*
 Thickness of plates $3\frac{1}{8}$ " description of longitudinal joint *lap double* diameter of rivet holes $3\frac{1}{4}$ " pitch of rivets $3\frac{1}{2}$ "
 Working pressure of shell by rules 160 lbs Diameter of flue \checkmark thickness of plates 0
 If stiffened with rings \checkmark distance between rings \checkmark Working pressure by rules \checkmark
 End plates of superheater, or steam chest; thickness $1\frac{1}{2}$ " How stayed *one rod 2\frac{1}{4}" *diam*
 Superheater or steam chest; how connected to boiler *by neck.**

DONKEY BOILER— Description *Upright*
 Made at *Paisley* By whom made *Heming & Ferguson* when made *1881*
 Where fixed *Stokehold* working pressure 50 lbs Tested by hydraulic pressure to 100 lbs No. of Certificate *521*
 Fire grate area $14\frac{1}{2}$ sq. ft Description of safety valves *direct spring* No. of safety valves *one* area of each 70 "
 If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no - return*
 Diameter of donkey boiler $5\text{'}-0$ " length 10 ft description of riveting *lap double*
 thickness of shell plates $3\frac{1}{8}$ " diameter of rivet holes $3\frac{1}{4}$ " whether punched or drilled *punched*
 pitch of rivets $2\frac{1}{2}$ " lap of plating $3\frac{3}{4}$ " per centage of strength of joint 70
 thickness of crown plates $1\frac{1}{2}$ " stayed by *14 - 1\frac{1}{2} rods.
 Diameter of furnace, top $14\text{'}-0$ " bottom $14\text{'}-4$ " length of furnace $4\text{'}-0$ "
 thickness of plates $3\frac{1}{8}$ " description of joint *lap single*
 thickness of furnace crown plates $1\frac{1}{2}$ " stayed by *14 rods 1\frac{1}{2} *diam*
 Working pressure of shell by rules 67 lbs working pressure of furnace by rules 65 lbs
 diameter of uptake 10 thickness of plates $9\frac{1}{16}$ " thickness of water tubes $3\frac{1}{8}$ "**

The foregoing is a correct description,
Heming & Ferguson Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The Engines and Boilers are now in good order and safe working condition and eligible in my opinion to be noted in the Register Book & Lloyd's M.C. 5.81*

This is a correct description of the vessel is eligible to be noted in the Register Book & Lloyd's M.C. Notificated & recorded J.M.W. 30/5/81

Slating Steel £ 1-1-0
 The amount of Entry Fee £ 2 : 0 : 0 received by me.
 Special *J.M.W.* £ 12 : 15 : 0 *viz. £ 13.8.0*
 Certificate (if required) .. £ *gratis* *28/5/1881*
 (To be sent as per margin.)
 (Travelling Expenses, if any, £ 2-12-6)

Committee's Minute

Tuesday, May, 31st 1881.

A. J. O. M.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

W. J. O. M.
 Glasgow.