

REPORT ON MACHINERY.

8713

No. 8713

Port of West Hartlepool

THURS. 4 FEB 1892

Received at London Office

No. in Survey held at West Hartlepool

Date, first Survey 23 September 1891 Last Survey 22 January 1892

on the Screw Steamer Mount Stewart

(Number of Visits 33) Tons { Gross 438.4 Net 456.94 When built 1892

Master James Blyth Built at West Hartlepool By whom built W Gray & Co (Lim)

Engines made at West Hartlepool By whom made The Central Marine & Works when made 1892

Wheels made at West Hartlepool By whom made The Central Marine & Works when made 1892

Registered Horse Power 120 Owners Marquis of Londonderry Port belonging to Sunderland

ENGINES, &c.

Description of Engines Triple Exp. Inverted Direct Acting Surface Condensing No. of Cylinders 3 (3 Banks)

Diam. of Cylinders 18 - 28 1/2 - 47 1/2 Length of Stroke 33 Rev. per minute 65 Point of Cut off, High Pressure .55 Low Pressure .55

Diameter of Screw shaft 9 Diam. of Tunnel shaft 8 1/2 Diam. of Crank shaft journals 9 Diam. of Crank pin 9 size of Crank webs 12 1/2 x 5 1/2

Diameter of screw 11 - 0 Pitch of screw Differential No. of blades 4 state whether moveable No total surface 45 1/2 sq ft

No. of Feed pumps 2 diameter of ditto 2 1/2 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 diameter of ditto 3 Stroke 24 Can one be overhauled while the other is at work Yes

Where do they pump from Fore & Main Holds, Engine Room Tunnel, Fore & Aft Peaks & Sea.

No. of Donkey Engines 2 Size of Pumps Red - 2 1/2 dia x 4 Stroke duplex Where do they pump from Red - Sea, Hotwell, Tanks & Bilges

Ballast Sea, Tanks and Bilges. (Separate Bilge Suction)

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 4" dia Are they connected to condenser, or to circulating pump to bilge pump

How are the pumps worked by Levers from After 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 14th January 1892

Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Upper platform

BOILERS, &c.

No. of Boilers One Description Mult. cyl. single ended Material Steel (Subs. Iron) Letter (for record) S

Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 14.11.91 No 2253

Description of superheating apparatus or steam chest None. (Total Heating Surface 1850 sq ft)

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 42 Description of safety valves Spring direct No. to each boiler 2

Area of each valve 8.29 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 about 16" Diameter of boilers 14 - 9"

Length of boilers 10 - 0" description of riveting of shell long. seams TBS Treble circum. seams shell end flanged Thickness of shell plates 15/16"

Diameter of rivet holes 1 1/16" & 1 3/8" whether punched or drilled Drilled pitch of rivets Long 8 1/2" or 5 1/2" Lap of plating TBS 19/8" lap 9 1/2"

Percentage of strength of longitudinal joint 84.55% working pressure of shell by rules 162.6 lbs size of manholes in END 16" x 12"

No. of compensating rings 24 x 24 x 7/8" No. of Furnaces in each boiler 3 Description of Furnaces Brown's patent Ribbed

Inside diameter 43 1/2" length 6 - 4" thickness of plates 1/2" description of joint welded if rings are fitted No

Greatest length between rings ✓ working pressure of furnace by the rules 160.0 combustion chamber plating, thickness, sides 19/32 back 19/32 top 19/32

Pitch of stays to ditto, sides 8 5/8" back 8 1/2" x 8 1/4" top 8 1/2" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 163.7

Diameter of stays at smallest part 1.3837 working pressure of ditto by rules 166.6 end plates in steam space, thickness 1"

How stays are secured double Nuts working pressure by rules 160.9 lbs diameter of stays at smallest part 2.5367

Working pressure by rules 163.3 lbs Front plates at bottom, thickness 3/4" Back plates, thickness 7/8"

Greatest pitch of stays 12 1/2" working pressure by rules 169.0 Diameter of tubes 3 1/4" ex pitch of tubes 4 1/2" x 4 1/2" thickness of tube

Plating, front 15/16" back 7/8" how stayed stay tubes pitch of stays 9" x 9" width of water spaces 5"

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 ✓

Lloyd's Register Foundation

HPL 366-0199

DONKEY BOILER— Description *Steel. Vertical cylindrical with 3 cross tubes*
 Made at *West Hartlepool* by whom made *W Gray & Co (Linn)* when made *18.11.91* where fixed *Stokehole*
 Working pressure *75 lbs* tested by hydraulic pressure to *150 lbs* No. of Certificate *2254* fire grate area *✓* description of safety
 valves *Spring direct* No. of safety valves *one* area of each *7.66* if fitted with easing gear *Yes* if steam from main boilers can
 enter the donkey boiler *No* diameter of donkey boiler *5'-6"* length *10'-0"* description of riveting *double riv lap*
 Thickness of shell plates *3/8"* diameter of rivet holes *3/4"* whether punched or drilled *punched* pitch of rivets *2 3/4"* lap of plating *4 1/2"*
 per centage of strength of joint *72.7%* thickness of crown plates *1/6"* stayed by *6 stays 1 1/2" dia*
 Diameter of furnace, top *4-1* bottom *4-9"* length of furnace *4-6"* thickness of plates *1/2"* description of joint *single riv lap*
 Thickness of furnace crown plates *1/2"* stayed by *same as shell crown* working pressure of shell by rules *82*
 Working pressure of furnace by rules *75 lbs* diameter of uptake *14"* thickness of plates *3/8"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *One set Main Bearing Bolts & Nuts, One set Connecting Rod top end Bolts & Nuts, One set Connecting Rod bott end Bolts & Nuts, One set Coupling Bolts & Nuts, One set Piston Springs, One set Feed & Bilge pump Valves, Bolts & Nuts assorted 6 Bars Iron assorted*

The foregoing is a correct description,
 FOR THE CENTRAL MARINE ENGINE WORKS, Manufacturers of Main Engines & Boilers. *Thomas Mudd*

General Remarks (State quality of workmanship, opinions as to class, &c. *The Main Steam Pipes have been tested by hydraulic pressure to 320 lbs per sq inch & found tight. The Engines & Boilers of this Vessel have been constructed under special survey, of a good quality of workmanship, they have been tried under steam, safety valves adjusted, and found to work well and are now in my opinion eligible to have L.M.C. 1.92. Recorded in the Register of this Society.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 1.92. 4.2.92.

Large blue ink scribbles and signatures covering the lower middle section of the page.

The amount of Entry Fee .. £ 2 : 0 : 0 received by me,
 £ 18 : 18 : 0
 Donkey Boiler Fee £ 2 : 2 :
 Certificate (if required) .. £ : : : 3.2.18 92
 (Travelling Expenses, if any, £)

Thomas R. Blackie
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute **TUES. 9 FEB 1892**
+ L.M.C. 1.92

