

REPORT ON MACHINERY.

Received at London Office FRIDAY 12 DEC 1884

No. 18054

No. in Survey held at Newcastle Date, first Survey 16th Sept Last Survey 3 Dec 1884

Reg. Book. S. S. "Chelsea" (Number of Visits 14) Tons 1171

Master Palmer Built at Newcastle By whom built Palmer's Co When built 1884

Engines made at Newcastle By whom made Palmer's Co when made 1884

Boilers made at do By whom made do when made 1884

Registered Horse Power 120 Owners River Steam Collier Co Port belonging to London

ENGINES, &c.—

Description of Engines Inverted Compound Surface Condensing

Diameter of Cylinders 28 x 54 Length of Stroke 36 No. of Rev. per minute 70 Point of Cut off, High Pressure 5 Low Pressure 5

Diameter of Screw shaft 10 Diam. of Tunnel shaft 9 1/4 Diam. of Crank shaft journals 10 Diam. of Crank pin 10 1/2 size of Crank webs 7 1/4 x 13

Diameter of screw 13-3 Pitch of screw 14-6 No. of blades 4 state whether moveable no total surface 49 sq ft

No. of Feed pumps 2 diameter of ditto 4 1/4 Stroke 18 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 diameter of ditto 4 1/4 Stroke 18 Can one be overhauled while the other is at work yes

Where do they pump from Engine room, Lunnel well & After hold well

No. of Donkey Engines 2 Size of Pumps 11 0" x 12, 4 0" x 8 Where do they pump from Engine room, Lunnel well, after hold well, tanks, sea, & Feed Donkey from hotwell.

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 5 Are they connected to condenser, or to circulating pump Circ. pump

How are the pumps worked Lever over condenser

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 just 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 while building

Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from top platform.

BOILERS, &c.—

Number of Boilers one Description Circular Whether Steel or Iron Steel

Working Pressure 85 Tested by hydraulic pressure to 170 Date of test 31-10-84

Description of superheating apparatus or steam chest ✓

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 71.5 Description of safety valves Spring No. to each boiler 2

Area of each valve 17.70 Are they fitted with easing gear no No. of safety valves to superheater ✓ area of each valve ✓

Are they fitted with easing gear ✓ Smallest distance between boilers and bunkers or woodwork about 9" Diameter of boilers 15.6

Length of boilers 10-6 description of riveting of shell long. seams butt lap circum. seams double lap Thickness of shell plates 15/16

Diameter of rivet holes 1 7/16 whether punched or drilled drilled pitch of rivets 5 1/4 Lap of plating 9 1/8

Per centage of strength of longitudinal joint 72.5 working pressure of shell by rules 87 size of manholes in shell 16 x 12

Size of compensating rings as per plan No. of Furnaces in each boiler 4

Outside diameter 40 length, top 7-0 bottom 9-9 thickness of plates 17/32 & 9/16 description of joint double strap if rings are fitted half

Greatest length between rings 6-6 working pressure of furnace by the rules 90 combustion chamber plating, thickness, sides 1/2 back 1/2 top 1/2

Pitch of stays to ditto, sides 9 1/2 back 9 1/2 top 10 If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 85

Diameter of stays at smallest part 1 3/8 working pressure of ditto by rules 90 end plates in steam space, thickness 13/16

Pitch of stays to ditto 17 1/4 & 15 how stays are secured double nuts working pressure by rules 85 diameter of stays at smallest part 2 1/8

working pressure by rules 87 Front plates at bottom, thickness 1/16 Back plates, thickness 1/16

Greatest pitch of stays as per plan working pressure by rules 85 Diameter of tubes 3 1/2 pitch of tubes 5 x 4 3/4 thickness of tube plates, front 3/4 back 3/4 how stayed tubes pitch of stays 15 width of water spaces 6 1/2

Diameter of Superheater or Steam chest 4-0 length 5-0 thickness of plates 1/2 description of longitudinal joint lap double diam. of rivet holes 7/8

Pitch of rivets 2 1/2 working pressure of shell by rules 155 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 3/4 how stayed 1 1/8 5/16 Diam

Superheater or steam chest; how connected to boiler Contracted neck



DONKEY BOILER— Description *Vertical, Corn tub.*
 Made at *Darlington* by whom made *J. Shewell & Co.* when made *3-84* where fixed *Stokehole*
 Working pressure *70* tested by hydraulic pressure to *140* No. of Certificate *1131* fire grate area _____ description of safety
 valves *Spring* No. of safety valves *2* area of each *5-94* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *6-0* length *12-6* description of riveting *long lap double*
 Thickness of shell plates *1/2* diameter of rivet holes *13/16* whether punched or drilled *punched* pitch of rivets *2 3/4* lap of plating *1 1/4*
 per centage of strength of joint *70-4* thickness of crown plates *1/2* stayed by *Six 1 1/2 stay.*
 Diameter of furnace, top *4-11* bottom *5-5* length of furnace *4-11* thickness of plates *7/16* description of joint *lap single*
 Thickness of furnace crown plates *1/2* stayed by *Six 1 1/2 stay* working pressure of shell by rules *75 lb*
 Working pressure of furnace by rules *72* diameter of uptake *15* thickness of plates *7/16* thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *Spare Propeller, Two top end, Two bottom
 end & two main bearing bolts, One set Coupling bolts, One set
 piston Springs, One Safety Valve spring, Two feed & bilge pump
 valves & seats, assorted bolts & nuts & a few bars of iron.*

The foregoing is a correct description,
J. Shewell & Co. L^{td}
 Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this
 vessel has been constructed under special survey.
 The material & workmanship is good & the
 vessel is eligible in my opinion to have L.M.C.
 recorded.*)

*It is submitted that this
 vessel is eligible to have
 the inscription L.M.C.
 12-84 recorded.
 J.P.
 13/12/84*

W.L.S.

The amount of Entry Fee .. £ 2 : - : - received by me,
 Special £ 18 : - : -
 Donkey Boiler Fee £ - : - : -
 Certificate (if required) .. £ *gratis* : - : - *11th Decr. 1884*
 To be sent as per margin.

John H. Heck.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUESDAY 10 DEC 1884
+ J.P.

