

REPORT ON MACHINERY.

No. *6631* Port of *West Hartlepool* Received at London Office *MONDAY 7 NOV 1887*
 No. in Survey held at *Hartlepool & Sunderland* Date, *1st Survey 5th April* Last Survey *19th Oct. 1887*
 Reg. Book. *on the* *Screw Steamer "Murrumbidgee"* (Number of Visits *35*) Tons *1836*
 Master *J. M. Keegan* Built at *Sunderland* By whom built *J. S. Thompson & Sons* When built *1887*
 Engines made at *Hartlepool* By whom made *Messrs. P. Richardson & Sons* when made *1887*
 Boilers made at *Hartlepool* By whom made *Messrs. P. Richardson & Sons* when made *1887*
 Registered Horse Power *400* Owners *W. Lund* Port belonging to *London*

ENGINES, &c.—

Description of Engines *Inverted, Triple Expansion, 3 Cylinders & 3 Cranks*
 Diameter of Cylinders *27" 42" 70"* Length of Stroke *45* No. of Rev. per minute *65* Point of Cut off, High Pressure *5/16ths* Low Pressure *6/16ths*
 Diameter of Screw shaft *12 3/4"* Diam. of Tunnel shaft *12 1/4"* Diam. of Crank shaft journals *12 3/4"* Diam. of Crank pin *12 1/2"* size of Crank webs *19" x 8"*
 Diameter of screw *16.6"* Pitch of screw *18.6"* No. of blades *4* state whether moveable *no* total surface *85 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 *For², main, & after holds, After well, engine room, & sea.*
 No. of Donkey Engines *2* Size of Pumps *(7 1/2" x 9") (4 1/2" x 8")* Where do they pump from *(all ballast tanks engine room bilges & sea) (sea, hotwell, ballast tanks, all bilges & main boilers)*
 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 *2* and sizes *3 1/2" dia.* Are they connected to condenser, or to circulating pump *Circulating pump.*
 How are the pumps worked *By levers from the after piston rod crosshead.*
 Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *Valves & 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 *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 *Bilge suction to For² hold.* How are they protected *By wood casing*
 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 *28th Octr/87*
 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 *Three* Description *Cyl. Mult.² Double ended* Whether Steel or Iron *Steel*
 Working Pressure *150 lb.* Tested by hydraulic pressure to *300 lb.* Date of test *7th October 1887.*
 Description of superheating apparatus or steam chest *none*
 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 *58* Description of safety valves *Spring* No. to each boiler *2*
 Area of each valve *11.04* 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~~ 7"* Diameter of boilers *11.0"*
 Length of boilers *15.3"* description of riveting of shell long. seams *double butt strap* circum. seams *double riv. lap* Thickness of shell plates *29/32"*
 Diameter of rivet holes *5/16"* whether punched or drilled *drilled* pitch of rivets *1 row 6 1/4" 2 rows 3 1/2"* Lap of plating *7/16"*
 Percentage of strength of longitudinal joint *85* working pressure of shell by rules *151 lb.* size of manholes in shell *16 3/4" x 13"*
 Size of compensating rings *2.6" x 2.3" x 29/32"* No. of Furnaces in each boiler *4*
 Outside diameter *2.9"* length, top *5.9"* bottom *5.9"* thickness of plates *5/8"* description of joint *double butt strap* if rings are fitted *no*
 Greatest length between rings *—* working pressure of furnace by the rules *151 lb.* combustion chamber plating, thickness, sides *9/16"* back *—* top *9/16"*
 Pitch of stays to ditto, sides *8x8"* back *—* top *8x8"* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *151 lb.* Diameter of stays at smallest part *1 3/8"* working pressure of ditto by rules *185 lb.* end plates in steam space, thickness *1"*
 Pitch of stays to ditto *15" x 14"* how stays are secured *double nuts & washers* working pressure by rules *159 lb.* diameter of stays at smallest part *2 1/2"* working pressure by rules *175 lb.* Front plates at bottom, thickness *3/4"* Back plates, thickness *—*
 Greatest pitch of stays *—* working pressure by rules *—* Diameter of tubes *3 1/4"* pitch of tubes *4 1/2" x 4 1/2"* thickness of tube plates, front *3/4"* back *13/16"* how stayed *stay tubes* pitch of stays *9" x 9"* width of water spaces *1 1/4"*
 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 *—*

SLD955-0292

DONKEY BOILER— Description *Multitubular single ended*
 Made at *Gateshead* by whom made *C. C. P. & Co.* when made *26.7.87* where fixed *in stokehole*
 Working pressure *90 lbs* tested by hydraulic pressure to *180 lbs* No. of Certificate *2037* fire grate area *27* description of safety
 valves *spring* No. of safety valves *2* area of each *7 sq. ins* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *9.0* length *9.0* description of riveting *double*
 Thickness of shell plates *9/16* diameter of rivet holes *3/4* whether punched or drilled *x* pitch of rivets *3* lap of plating *3 3/4*
 per centage of strength of joint *75* thickness of ~~end~~ *end* plates *1/6* stayed by *1 3/4* steel stays *14 1/2* pitch. riveted washers
 Diameter of furnace, top *27* bottom *—* length of furnace *5.6* thickness of plates *1/2* description of joint *single riv. lap*
 Thickness of ~~furnace crown~~ *comb + chamber* plates *15/16* stayed by *1 1/2* steel stays *8 1/2 x 7 1/4* tube working pressure of shell by rules *97 lbs*
 Working pressure of furnace by rules *129* diameter of uptake *—* thickness of plates *1/6* thickness of water tubes *ordinary*

SPARE GEAR. State the articles supplied:— *One set of connecting rod bolts, One set of main
 bearing bolts, One propeller, one air pump bucket, one circulating pump
 bucket, One air pump head valve, One set of connecting rod bushes, 1 set of Coupling
 bolts, 1 set of feed and bilge pump valves, bolts nuts and rim assorted.*

The foregoing is a correct description,

Thos. & Son Manufacturer of Engines & Steam Boilers.

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

*Tested the main steam pipes by hydraulic pressure to 300 lbs
 per square inch. The machinery and main boilers
 of this vessel have been constructed under Special Survey
 and of a good quality of workmanship they have been
 tried under steam and found to work well and will,
 in my opinion, be eligible to have the notification
 L. M. C. 10.87. recorded in the Register Book when
 the propeller, (which was broken on passing through the
 Newcastle dock entrance) has been renewed, The A.
 boiler examined under steam, The screw tunnel was
 water tight, and the spare gear supplied in accor.
 with the Rules and to the satisfaction of a Surveyor
 of this Society. The vessel has proceeded to Hull
 for completion.*

*A new propeller was fitted; the spring safety valves of the donkey boiler
 were adjusted under steam, to retain a working pressure of 80 lbs; the turn
 was made watertight, and spare gear supplied as per rule.*
William Allison.

The amount of Entry Fee *£ 3 : 0 : 0* *not at Stk.* received by me,

Special *£ 40 : 0 : 0*

Donkey Boiler Fee *£ : : :*

Certificate (if required) *£ : : :* *5/11/1887*

To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

TUESDAY 8 NOV 1887

L. M. C.

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



Lloyd's Register
Foundation