

REPORT ON MACHINERY. 6813

Port of *West Hartlepool*

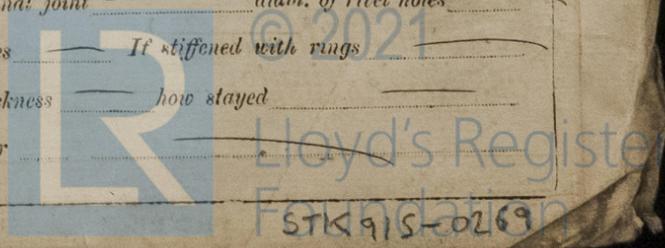
WEDNES. 28 OCT 1887

Received at London Office

Survey held at *Hartlepool* Date, first Survey *4th January* Last Survey *8th Oct 1887*
 Book. *"Roddam"* (Number of Visits *37*) Tons *1465*
 on the *Screw Steamer "Roddam"* Tons *2364*
 Built at *Hartlepool* By whom built *P. Withey & Co.* When built *1887*
 By whom made *P. Richardson & Sons* when made *1887*
 By whom made *P. Richardson & Sons* when made *1887*
 Owners *Steel, Young & Co.* Port belonging to *London*

Registered as *ES, &c.*
 Description of Engines *Inverted, Triple Expansion, 3 Cylinders & 3 Crankers.*
 Diameter of Cylinders *22", 36", 58"* Length of Stroke *39"* No. of Rev. per minute *65* Point of Cut off, High Pressure *5 strokes* Low Pressure *6 strokes*
 Diameter of Screw shaft *11 1/4"* Diam. of Tunnel shaft *10 3/4"* Diam. of Crank shaft journals *11 1/4"* Diam. of Crank pin *11 1/4"* size of Crank webs *16 1/2" x 7 1/2"*
 Diameter of screw *15.0"* Pitch of screw *17.0"* No. of blades *4* state whether moveable *no* total surface *68 sq. ft.*
 Diameter of Feed pumps *2* diameter of ditto *3 1/4"* Stroke *23"* Can one be overhauled while the other is at work *yes.*
 Diameter of Bilge pumps *2* diameter of ditto *3 3/4"* Stroke *23"* Can one be overhauled while the other is at work *yes.*
 Where do they pump from *Forward hold, Engine room, and after well.*
 Diameter of Donkey Engines *2* Size of Pumps *(7 1/2 x 9) (4 x 8)* Where do they pump from *(Sea, tanks, and engine room bilge) (Sea, hotwell, bilges, tanks, & 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*
 Number of bilge injections *one* and sizes *4 1/2"* 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 *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*
 How are the pipes 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 *2nd August 1887.*
 Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *On platform of engine room*

OILERS, &c.
 Number of Boilers *Two* Description *Cyl. Mult. Single Ended* Whether Steel or Iron *Steel.*
 Working Pressure *150 lbs.* Tested by hydraulic pressure to *300 lbs.* Date of test *22nd July 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 *46* 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
 Are they fitted with easing gear
 Smallest distance between boilers and bunkers or woodwork *17 1/2"* Diameter of boilers *13.4"*
 Length of boilers *9.9* description of riveting of shell long. seams *double butt strap* circum. seams *double rivet lap* Thickness of shell plates *1 3/32"*
 Diameter of rivet holes *1 3/32"* whether punched or drilled *drilled* pitch of rivets *12 on 7 1/2", 22 on 3 3/32"* Lap of plating *8 3/8"*
 Percentage of strength of longitudinal joint *85.3* working pressure of shell by rules *151 lbs.* size of manholes in shell *none*
 Size of compensating rings
 No. of Furnaces in each boiler *3*
 Outside diameter *3.0"* length, top *6.6"* bottom *7.0"* thickness of plates *15 1/32"* description of joint *welded* if rings are fitted *no*
 Greatest length between rings
 working pressure of furnace by the rules *152 lbs.* combustion chamber plating, thickness, sides *9/16"* back *9/16"* top *9/16"*
 Pitch of stays to ditto, sides *8 x 7 3/4"* back *8 x 7 3/4"* top *8 x 8"* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *151 lbs.* Diameter of stays at smallest part *1 3/8"* working pressure of ditto by rules *185 lbs.* end plates in steam space, thickness *1 3/32"*
 Pitch of stays to ditto *15 7/8" x 15 7/8"* how stays are secured *double nuts & washers* working pressure by rules *151 lbs.* diameter of stays at smallest part *2 5/8"* working pressure by rules *161 lbs.* Front plates at bottom, thickness *3/4"* Back plates, thickness *13/16"*
 Greatest pitch of stays *11 1/2"* working pressure by rules *153 lbs.* 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
 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



DONKEY BOILER— Description *Vertical Victoria patent, Steel*
 Made at *Gatehead* by whom made *Clake Chapman, Laird & Co* when made *3.8.87* where fixed *In store*
 Working pressure *80 lbs.* tested by hydraulic pressure to *160 lbs.* No. of Certificate *2310* fire grate area *18.9 sq ft* description
 valves *Spring* No. of safety valves *one* area of each *12.56* if fitted with easing gear *yes* if steam from main
 enter the donkey boiler *no* diameter of donkey boiler *6.3* length *14.1* description of riveting *double lap*
 Thickness of shell plates *1/16* diameter of rivet holes *7/8* whether punched or drilled *punched* pitch of rivets *3 3/16* lap of plating
 per centage of strength of joint *75* thickness of crown plates *9/16* stayed by *6 gusset plates 12" x 7/16"*
 Diameter of furnace, top *5.0* bottom — length of furnace — thickness of plates *1/2* description of joint *single lap*
 Thickness of furnace crown plates *7/8* stayed by *conical shape* working pressure of shell by rules *94*
 Working pressure of furnace by rules *80 lbs.* diameter of uptake — thickness of plates *3/8 x 3/4* thickness of water tubes *as reported by J. F. Wallace*

SPARE GEAR. State the articles supplied:— *One propeller, one set of connecting rod bolts, one set of main bearing bolts, one set of coupling bolts & nuts, one set of valves & ecc. for the feed and bilge pumps, also for the donkey pumps. 9 boiler tubes, 6 Condenser tubes, one set of spring for the H.P. also for the S.P. pistons. 89 bolts & nuts ass'd. Iron assorted.*

The foregoing is a correct description,
 Manufacturer of Engines & main boilers.

PRO T. RICHARDSON & SONS

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

The machinery and 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 are now in safe and efficient working condition and eligible, in my opinion to have the notification **L.M.C. 10.87.** recorded in the Register of this Society.

This is submitted that this vessel is eligible to have the notification L.M.C. 10.87 recorded.
 27/10/87

[Large handwritten signature]

The amount of Entry Fee .. £ 2 : 0 : 0 received by me,
 Special .. £ 30 : 0 : 0
 Donkey Boiler Fee .. £ : :
 Certificate (if required) .. £ : : 25.10.1887.
 (To be sent as per margin.)
 (Travelling Expenses, if any, £)

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

Committee's Minute
 FRIDAY 20 OCT 1887
[Signature]

