

REPORT ON MACHINERY.

Port of Best Hartlepool

Received at London Office

SAT. 14 APL 1894

No. in Survey held at Best Hartlepool
Reg. Book.

Date, first Survey 25th Oct 93 Last Survey 5th April 1894
(Number of Visits 33)

on the S.S. "Ranninstry"

Tons { Gross 2845.17
Net 1828.31

Master Elijah White Built at H. Spool By whom built Jurnep Pithey & Co. L^{rs} When built 1894

Engines made at H. Hartlepool By whom made J. Richardson & Sons when made 1894

Boilers made at Do By whom made Do when made 1894

Registered Horse Power 250 Owners Sicewright Bacon & Co Port belonging to H. Hartlepool

Nom. Horse Power as per Section 28 251

ENGINES, &c. — Description of Engines Triple expansion No. of Cylinders 3

Diameter of Cylinders 23. 27. 61 Length of Stroke 42 Revolutions per minute 60 Diameter of Screw shaft as per rule 11.08
 Diameter of Tunnel shaft as per rule 10.52 Diameter of Crank shaft journals 11 3/4 Diameter of Crank pin 11 3/4 Size of Crank webs 7 3/4 x 14
 Diameter of screw 16.0 Pitch of screw 16.0 No. of blades 4 State whether moveable no Total surface 70.55 sq

No. of Feed pumps 2 Diameter of ditto 2 3/4 Stroke 26 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 2 3/4 Stroke 26 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 3 1/2 x 7 & 8 1/2 x 7 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 3" and two 3 1/2" In Holds, &c. Fore peak one 2 1/2", forward well one 3 1/2", main hold well one 3 1/2", main after hold well one 3 1/2", aft hold well one 3 1/2", after well & peak one 2 1/2"

No. of bilge injections 1 sizes 6" Connected to condenser, or to circulating pump Pump Is a separate donkey suction fitted in Engine room & size yes 3 1/2"

Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible none

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 At line

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 and all boiler mountings accessible at all times yes

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel Is the screw shaft tunnel watertight yes

Is it fitted with a watertight door yes worked from upper platform

BOILERS, &c. — (Letter for record (S)) Total Heating Surface of Boilers 3933 sq

No. and Description of Boilers 2 Cylindrical single ended Working Pressure 165 Tested by hydraulic pressure to 330

Date of test 31.1.94 Can each boiler be worked separately yes Area of fire grate in each boiler 45 sq No. and Description of safety valves to each boiler 2 Spring Area of each valve 8.39 Pressure to which they are adjusted 170 lb Are they fitted with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean diameter of boilers 14.9"

Length 10.1 1/2 Material of shell plates Steel Thickness 1 3/8 Description of riveting: circum. seams Lap double long. seams R.B. tuble

Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/4" Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 89 plate 84.84 Working pressure of shell by rules 167.7 Size of manhole in shell 16 x 12"

Size of compensating ring - No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 3.9 3/4

Length of plain part top 6.0 bottom 6.9 Thickness of plates crown 5/8 bottom 7/8 Description of longitudinal joint beaded No. of strengthening rings -

Working pressure of furnace by the rules 175 Combustion chamber plates: Material Steel Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 2/8

Pitch of stays to ditto: Sides 8 5/8 Back 8 3/4 Top 8 5/8 If stays are fitted with nuts or riveted heads Yants Working pressure by rules 196

Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 730 Working pressure by rules 193 End plates in steam space: Material Steel Thickness 1 3/8 Pitch of stays 18 1/2 x 16 1/2 How are stays secured R.B.M. Working pressure by rules 170 Material of stays Steel

Diameter at smallest part 2 3/4" Area supported by each stay 2960 Working pressure by rules 180 Material of Front plates at bottom Steel

Thickness 1 3/8 Material of Lower back plate Steel Thickness 3/8 Greatest pitch of stays 12 3/16 Working pressure of plate by rules 165

Diameter of tubes 2 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 3 1/8 Back 3/4 Mean pitch of stays 9 1/2"

Pitch across wide water spaces 14 1/2" Working pressures by rules 171 Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 7 1/4 x 1 3/4 Length as per rule 2.4 Distance apart 8 5/8" Number and pitch of Stays in each 2. pitch 8 1/4

Working pressure by rules 191 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately - Diameter - Length - Thickness of shell plates - Material - Description of longitudinal joint - Diam. of rivet holes - Pitch of rivets - Working pressure of shell by rules - Diameter of flue - Material of flue plates - Thickness -

If stiffened with rings - Distance between rings - Working pressure by rules - End plates: Thickness - How stayed -

Working pressure of end plates - Area of safety valves to superheater - Are they fitted with easing gear -

DONKEY BOILER— Description *Vertical four crop tubes*
 Made at *Stockton* By whom made *J. Hudson & Co. Ld.* When made *26.1.94* Where fixed *Stockton*
 Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *775* Fire grate area *28.5* Description of safety valves *Spring*
 No. of safety valves *1* Area of each *14.19* Pressure to which they are adjusted *85* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Diameter of donkey boiler *7.0"* Length *14.0"* Material of shell plates *Steel* Thickness *15/32"*
 Description of riveting long. seams *Lap double* Diameter of rivet holes *13/16"* Whether punched or drilled *Punched* Pitch of rivets *2"*
 Lap of plating *4 1/4"* Per centage of strength of joint Rivets *68.8* Thickness of shell crown plates *9/16"* Radius of do. *5.9"* No. of Stays to do. *7*
 Dia. of stays *1 3/4"* Diameter of furnace Top *5.8"* Bottom *6.4"* Length of furnace *6.3"* Thickness of furnace plates *2 1/32"* Description of joint *Lap Single* Thickness of furnace crown plates *5/8"* Stayed by *Same as Shell* Working pressure of shell by rules *83.8*
 Working pressure of furnace by rules *80.2* Diameter of uptake *16"* Thickness of uptake plates *9/16"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *Propeller, 2 main bearing bolts & nuts, 2 top end bolts & nuts, 2 bottom end bolts & nuts, 1 set of shaft coupling bolts & nuts, 1 set of feed valves, 1 set of bilge valves, piston bolts & nuts, 1 set of valves for air & circulating pump, nuts, bolts & iron.*
The foregoing is a correct description,
J. Hudson & Co. Ld. Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery has been specially surveyed during construction the material and workmanship good & renders the vessel eligible in my opinion to have the Record L.M.C. 4.94 in the Register Book of the Society.*

It is submitted that this vessel is eligible for THE RECORD & L.M.C. 4.94

J. Im.
14/4/94

Large handwritten signature

MACHINERY WRITTEN.

Certificate (if required) to be sent to

The amount of Entry Fee..	£ 2:	:	When applied for,
Special	£ 32:	11:	11. 4. 18. 94.
Donkey Boiler Fee	£ :	:	When received,
Travelling Expenses (if any) £	:	:	12. 4. 18. 94.

Richard Ains
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping
West Hartlepool

Committee's Minute **TUES. 17 APR 1894**

Assigned

+ L.M.C. 4.94



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