

REPORT ON MACHINERY.

Port of *West Hartlepool*

MON. 21 JAN 1895

Received at London Office

No. in Survey held at *West Hartlepool* Date, first Survey *10th April 94* Last Survey *18th Jan 1895*
 Reg. Book. *22 Sup. on the Steel SS "LESREAUUX"* (Number of Plates *65*)
 Master *A Oatway 92.95* Built at *West Hartlepool* By whom built *H Gray & Co (Lim)* Tons { Gross *3008* Net *1939*
 Engines made at *West Hartlepool* By whom made *Central Marine Engine Works* when made *1894.5*
 Boilers made at *Ditto* By whom made *(H Gray & Co) Ditto* when made *1894.5*
 Registered Horse Power ~~*258*~~ *300* Owners *"Lesreaulx" S.S. Co Lim.* Port belonging to *Cardiff*
 Nom. Horse Power as per Section 28. *258* *Mores, Prop., Managers*

ENGINES, &c.— Description of Engines *Triple expansion: three cranks* No. of Cylinders *three*
 Diameter of Cylinders *24" 38" 64"* Length of Stroke *42"* Revolutions per minute *65* Diameter of Screw shaft *as per rule 11.24"*
 Diameter of Tunnel shaft *as per rule 10.7"* Diameter of Crank shaft journals *11.5"* Diameter of Crank pin *11.5"* Size of Crank webs *7.8" x 16.4"*
 Diameter of screw *15.6"* Pitch of screw *✓* No. of blades *4* State whether moveable *no* Total surface *80 sq. ft.*
 No. of Feed pumps *2* Diameter of ditto *3.75"* Stroke *26"* Can one be overhauled while the other is at work *yes*
 No. of Bilge pumps *2* Diameter of ditto *4"* Stroke *26"* Can one be overhauled while the other is at work *yes*
 No. of Donkey Engines ~~*two*~~ *3* Sizes of Pumps *4" x 6" feed & 10" x 9" (two)* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *Three: 3.5" dia.* In Holds, &c. *Seven: two 3" dia to Fore hold: two 3" dia to Fore Main Hold: two 3" dia after hold: & one 2.5" dia in tunnel with connection to After Peak.*
 No. of bilge injections *1* sizes *5"* Connected to condenser, or to circulating pump *yes* Is a separate donkey suction fitted in Engine room & size *yes. 3"*
 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, except main shaft injections, distance pieces.* Are they Valves or Cocks *both.*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold 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 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 *before launch* Is the screw shaft tunnel watertight *yes.*
 Is it fitted with a watertight door *yes* worked from *top platform of Engine Room.*

BOILERS, &c.— (Letter for record *S.*) Total Heating Surface of Boilers *3750 sq. ft.*
 No. and Description of Boilers *2. Mul: Cyl: single ended.* Working Pressure *160 LBS* Tested by hydraulic pressure to *320 LBS*
 Date of test *26.10.94* Can each boiler be worked separately *yes* Area of fire grate in each boiler *42.5 sq* No. and Description of safety valves to each boiler *2 spring direct.* Area of each valve *8.29 sq* Pressure to which they are adjusted *165 LBS* Are they fitted with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *24"* Mean diameter of boilers *14.9"*
 Length *10'-0"* Material of shell plates *steel* Thickness *1.3/16"* Description of riveting: circum. seams *Treble.* long. seams *Treble.*
 Diameter of rivet holes in long. seams *1.3/16"* Pitch of rivets *8"* Lap of plates or width of butt straps *17.3/4"*
 Per centages of strength of longitudinal joint rivets *86.6* Working pressure of shell by rules *164 LBS* Size of manhole *in end 16" x 12"*
 Size of compensating ring *24" x 24" x 1.5/16"* No. and Description of Furnaces in each boiler *3. Purves' Material steel* Outside diameter *43.5"*
 Length of *furnaces* *6'-0"* Thickness of plates *1/2"* Description of longitudinal joint *weld* No. of strengthening rings *✓*
 Working pressure of furnace by the rules *160 LBS* Combustion chamber plates: Material *steel* Thickness: Sides *19/32"* Back *19/32"* Top *19/32"* Bottom *7/8"*
 Pitch of stays to ditto: Sides *8.5/8" x 8.5/8"* Back *8" x 8.5/8"* Top *8.1/2"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *164 LBS*
 Material of stays *steel* Diameter at smallest part *1.38"* Area supported by each stay *74 sq* Working pressure by rules *161 LBS* End plates in steam space: Material *steel* Thickness *1"* Pitch of stays *16.1/16" x 16.1/16"* How are stays secured *double nuts washers* Working pressure by rules *162 LBS* Material of stays *steel*
 Diameter at smallest part *2.53"* Area supported by each stay *278 sq* Working pressure by rules *164 LBS* Material of Front plates at bottom *steel*
 Thickness *5/8"* Material of Lower back plate *steel* Thickness *1"* Greatest pitch of stays *14"* Working pressure of plate by rules *173 LBS*
 Diameter of tubes *3.75"* Pitch of tubes *4.2" x 4.2"* Material of tube plates *skel* Thickness: Front *15/16"* Back *5/8"* Mean pitch of stays *9" x 9"*
 Pitch across wide water spaces *14.1/4"* Working pressures by rules *166 LBS* Front Girders to Chamber tops: Material *steel* Depth and thickness of girder at centre *8" x 1.75"* Length as per rule *24"* Distance apart *8.5"* Number and pitch of Stays in each *one. 9"*
 Working pressure by rules *172 LBS* 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—*2* Description *Two. Vertical, cyl. 4 cross tubes.*
 Made at *Hest Hartlepool.* By whom made *R Gray & Co (Linn)* When made *1894* Where fixed *Stoke hold.*
 Working pressure *80 LBS* tested by hydraulic pressure to *160 LBS* No. of Certificate *2439* Fire grate area Description of safety valves *direct spring.*
 No. of safety valves *one* Area of each *11.79* Pressure to which they are adjusted *85 LBS* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *6'-0"* Length *16'-0"* Material of shell plates *steel* Thickness *13/32"*
 Description of riveting long. seams *double riv. lap.* Diameter of rivet holes *13/16"* Whether punched or drilled *annealed* Pitch of rivets *2 3/4"*
 Lap of plating *4 1/2"* Per centage of strength of joint Rivets *49.0* Plates *70.4* Thickness of shell crown plates *1/2"* Radius of do. No. of Stays to do. *6*
 Dia. of stays. *2"* Diameter of furnace Top *4'-7 1/4"* Bottom *5'-3 1/4"* Length of furnace *5'-9"* Thickness of furnace plates *19/32"* Description of joint *single riv. lap* Thickness of furnace crown plates *19/32"* Stayed by *same as shell crown* Working pressure of shell by rules *81 LBS.*
 Working pressure of furnace by rules *88 LBS.* Diameter of uptake *15"* Thickness of uptake plates *3/8"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:—*2 Cou. rod top & 2 bottom end bolts & nuts: 2 main bearing, & one set of coupling, bolts: 1 set of feed & bilge pump valves: 1 set of HP piston springs: bolts, nuts, & iron, assorted: 1 HP valve, & face: 13rd crank shaft: 1 tail end shaft: 1 propeller: and 1 eccentric strap: 1 valve spindle: 1 eccentric rod.*

The foregoing is a correct description,
 FOR THE CENTRAL MARINE ENGINE WORKS,
 (Incorporated in the U.K.)
 Manufacturers of Main Engines & Boilers only.

E. H. James

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed under Special Survey; the materials, and workmanship are good; and, in my opinion, entitle the vessel to have the notation L.M.C. 1-95, entered in the Register Book of this Society.*
Mudd's evaporator fitted aboard.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 1.95

A.P.R.
21-1-95

The Surveyors are requested not to write on or below the space for Committee's Minute.

Certificate (if required) to be sent to _____

The amount of Entry Fee..	£ 2 : 0 :	When applied for,
Special	£ 32 : 18 :	19.1.95
Donkey Boiler Fee	£ 4 : 4 :	When received,
Travelling Expenses (if any) £	:	19.1.95

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

Committee's Minute
 Assigned
 TUES. 22 JAN 1895
 + L.M.C. 1.95

