

REPORT ON MACHINERY.

Port of WEST HARTLEPOOL.

MON. MAR 4 1901

Received at London Office

No. in Survey held at *West Hartlepool* Date, first Survey *31st July 1900* Last Survey *28th July 1901*
 Reg. Bopk. *uppt* on the *S.S. Mountfields* (Number of Visits *55*)
 Master *P. Boyle* Built at *West Hartlepool* By whom built *R. Gray & Co. Ltd.* Tons Gross *3038* Net *1944*
 Engines made at *West Hartlepool* By whom made *Central Marine Engine Works Ltd.* When made *1901*
 Boilers made at *do* By whom made *do* when made *1901*
 Registered Horse Power *300* Owners *The Doughty Shipping Co. Ltd.* Port belonging to *West Hartlepool*
 Nom. Horse Power as per Section 28 *257* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *Triple expansion* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *24. 38. 64* Length of Stroke *42* Revs. per minute *65* Dia. of Screw shaft *as per rule 11.82* Lgth. of stern bush *4.9*
 Dia. of Tunnel shaft *as per rule 10.69* Dia. of Crank shaft journals *as per rule 11.26* Dia. of Crank pin *11.2* Size of Crank webs *78 x 16* Dia. of thrust shaft under collars *11 3/4* Dia. of screw *15.6* Pitch of screw *15.3* No. of blades *4* State whether moveable *no* Total surface *80 sq*
 No. of Feed pumps *2* Diameter of ditto *3 1/4* 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 *2* Sizes of Pumps *4 x 6 & 10 x 9* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *Four, two 3 1/2" & two 3"* In Holds, &c. *Seven, two 3" in each hold and one 2 1/2" in tunnel well connected to peak.*
 No. of bilge injections *1* sizes *5"* 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 *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 *26.2.01* 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 *3738* Is forced draft fitted *no*
 No. and Description of Boilers *Two Single ended Steel* Working Pressure *160* Tested by hydraulic pressure to *320*
 Date of test *27.11.00* Can each boiler be worked separately *yes* Area of fire grate in each boiler *49 sq* No. and Description of safety valves to each boiler *Two Spring* Area of each valve *8.29* 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 *2.3* Mean dia. of boilers *15.0* Length *10.0* Material of shell plates *Steel*
 Thickness *1 1/8* Range of tensile strength *27-30* Are they welded or flanged *Both* Descrip. of riveting: cir. seams *Lap & butt* long. seams *Butt & straps*
 Diameter of rivet holes in long. seams *1 3/16* Pitch of rivets *8 1/2* Lap of plates or width of butt straps *18"*
 Per centages of strength of longitudinal joint *86.1* Working pressure of shell by rules *160.5* Size of manhole in *end* *16 x 12*
 Size of compensating ring *Flanged* No. and Description of Furnaces in each boiler *3 Plain* Material *Steel* Outside diameter *3.9*
 Length of plain part *top 6.0 bottom 6.0* Thickness of plates *crown 3/4 bottom 4* Description of longitudinal joint *Butt & straps* No. of strengthening rings *1/2*
 Working pressure of furnace by the rules *166.6* Combustion chamber plates: Material *Steel* Thickness: Sides *5/8* Back *5/8* Top *5/8* Bottom *3/4*
 Pitch of stays to ditto: Sides *9* Back *9* Top *9* If stays are fitted with nuts or riveted heads *Yes* Working pressure by rules *162*
 Material of stays *Steel* Diameter at smallest part *1.5* Area supported by each stay *83 sq* Working pressure by rules *171* End plates in steam space: Material *Steel* Thickness *1 1/32* Pitch of stays *22 1/2 x 22* How are stays secured *By nuts* Working pressure by rules *163* Material of stays *Steel*
 Diameter at smallest part *3.28* Area supported by each stay *49 sq* Working pressure by rules *171* Material of Front plates at bottom *Steel*
 Thickness *1 5/16* Material of Lower back plate *Steel* Thickness *1 5/16* Greatest pitch of stays *15"* Working pressure of plate by rules *195*
 Diameter of tubes *3 1/4* Pitch of tubes *4 1/2* Material of tube plates *Steel* Thickness: Front *1 5/16* Back *2 1/32* Mean pitch of stays *9*
 Pitch across wide water spaces *14 1/4* Working pressures by rules *166* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *8 1/4 x 1 1/4* Length as per rule *2.6* Distance apart *7 1/2* Number and pitch of Stays in each *Two 9" pitch*
 Working pressure by rules *164* Superheater or Steam chest; how connected to boiler *-* 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— No. 1 Description *Cochran's Patent*
 Made at *Amman* By whom made *Cochran & Co* When made *1900* Where fixed *At Rhodé*
 Working pressure *80* tested by hydraulic pressure to *100* No. of Certificate *6608* Fire grate area *288* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *7.07* Pressure to which they are adjusted *82 lb* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *7.6* Length *15.6* Material of shell plates *Steel* Thickness *1/2* Range of tensile strength *27-32* Descrip. of riveting long. seams *Sup double* Dia. of rivet holes *7/8* Whether punched or drilled *Drilled* Pitch of rivets *2 7/8*
 Lap of plating *4 3/8* Per centage of strength of joint *71* Rivets *69.5* Thickness of shell crown plates *15/32* Radius of do. *3.9* No. of Stays to do. *none*
 Dia. of stays. *—* *Radius* Diameter of furnace Top *3.3* Bottom *—* Length of furnace *—* Thickness of furnace plates *17/32* Description of joint *Riveted* Thickness of furnace crown plates *17/32* Stayed by *none* Working pressure of shell by rules *90.4*
 Working pressure of furnace by rules *81.7* Diameter of uptake *2 1/2* Thickness of uptake plates *21/32* *3/4* Thickness of *stay* tubes *1/4*

SPARE GEAR. State the articles supplied:— *Propeller, 2 main bearing bolts, 2 top end bolts, 2 bottom end bolts, 1 set of shaft coupling bolts all fitted with nuts, 1 set of feed pump valves, 1 set of bilge pump valves, Spring for S.P. piston, nut-bolts given.*

The foregoing is a correct description,

Manufacturer.

Wm. B. Brown

Dates of Survey while building
 During progress of work in shops—
 During erection on board vessel—
 Total No. of visits
1900. July 31. Aug 2. 3. 13. 22. 27. 30. Sept. 3. 5. 7. 12. 17. 21. 26. 29. Oct. 1. 4. 5. 8. 10. 11. 13. 16. 17. 18. 19. 20. 22. 23. 24. 25. 30. 31. Nov. 2. 5. 7. 8. 12. 14. 19. 20. 21. 23. 27. 28. 29. Dec. 3. 1901. Jan. 9. 10. 30. Feb. 1. 7. 25. 26. 28.
55

Is the approved plan of main boiler forwarded herewith *yes*

donkey „ „ „ *no*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been specially surveyed during construction the material and workmanship good and renders the vessel eligible in my opinion to have the Record *LM.C. 2.01* in the Register Book of the Society.*

It is submitted that this vessel is eligible for THE RECORD. *LM.C. 2.01*

The amount of Entry Fee. £ *2* :
 Special „ „ £ *32* : *17*
 Donkey Boiler Fee „ „ £ :
 Travelling Expenses (if any) £ :
 When applied for, *2.3.01*
 When received, *2.3.01*

TUES. MAR 5 1901

Committee's Minute

Assigned

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



© 2020

Lloyd's Register Foundation

WRITTEN

Certificate (if required) to be sent to W. Hartlepool

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