

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. Book. upt. on the S.S. Mountfields. Number of Visits 55 Tons Gross 3038
 Master P. Boyle Built at West Hartlepool By whom built R. Gray & Co. Ltd. When built 1901
 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
 Dia. of Tunnel shaft as per rule 10.69 Dia. of Crank shaft journals as per rule 11.26 Dia. of Crank pin 11 1/2 Size of Crank webs 7 1/2 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 moceable 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 tubes 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 rivets 86.1 Working pressure of shell by rules 160.5 Size of manhole in shell 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 Tubs Working pressure by rules 162
 Material of stays Steel Diameter at smallest part 1.5 Area supported by each stay 83 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 495 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 -

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?



DONKEY BOILER— No. 1 Description Cochran's Patent
 Made at Amman By whom made Cochran & Co When made 1900 Where fixed St. Raloch
 Working pressure 80 tested by hydraulic pressure to 100 No. of Certificate 5608 Fire grate area 284 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. — Callies 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 water 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. J. B. Rossmore

Dates of Survey while building	During progress of work in shops—	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.
	During erection on board vessel—	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.
	Total No. of visits	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

R.S.
5.3.01.

The amount of Entry Fee..	£ 2	When applied for,	2.3.1901
Special ..	£ 32	When received,	2.3.1901
Donkey Boiler Fee ..	£		
Travelling Expenses (if any) £			

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

Committee's Minute
 Assigned

TUES. MAR 5 1901



W. Hurtlepool

Certificate (if required) to be sent to the Surveyors and requested not to write on or below the space for Committee's Minute.

WHEN WRITTEN