

REPORT ON MACHINERY.

No. 13097.

Port of WEST HARTLEPOOL.

Received at London Office MON. 22 OCT. 1906

No. in Survey held at West Hartlepool Date, first Survey 18th May, 06 Last Survey 17th October, 1906
 Reg. Book. Veraston (Number of Visits 56)
 Supplied on the Steel Steamer Tons { Gross 1825.36 Net 1154.95
 Master J. W. Weeks Built at West Hartlepool By whom built W. Gray & Co. Ltd When built 1906
 Engines made at West Hartlepool By whom made Central Marine & Works when made 1906
 Boilers made at West Hartlepool By whom made Central Marine & Works when made 1906
 Registered Horse Power 167 Owners Marchiston S.S. Co. Ltd (W. Scott & Co) Port belonging to West Hartlepool
 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three
 Dia. of Cylinders 20: 3 1/2: 53 Length of Stroke 36 Revs. per minute 65 Dia. of Screw shaft 11 1/4 Material of Steel
 the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight
 the propeller boss Yes If the liner is in more than one length are the joints burned No If the liner does not fit tightly at the part
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive No If two
 liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 48
 Dia. of Tunnel shaft 9 1/4 Dia. of Crank shaft journals 9 1/4 Dia. of Crank pin 10 1/2 Size of Crank webs 4 1/2 Dia. of thrust shaft under
 flange 10 1/2 Dia. of screw 1 1/2 Pitch of Screw 13: 9 No. of Blades 4 State whether moveable No Total surface 63 1/2
 No. of Feed pumps Two Diameter of ditto 2 1/2 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two Diameter of ditto 3 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two Sizes of Pumps 8: 8 & 1 1/2: 5 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room Two 2 1/2 one 3 In Holds, &c. Two 2 1/2
 No. of Bilge Injections Five 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 Yes
 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 Below
 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 No How are they protected No
 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
 Dates of examination of completion of fitting of Sea Connections 13/9/06 of Stern Tube 4/10/06 Screw shaft and Propeller 4/10/06
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top Station

BOILERS, &c.—(Letter for record S) Manufacturers of Steel W. & A. Mitchell
 Total Heating Surface of Boilers 2495 Is Forced Draft fitted No No. and Description of Boilers Two Single Ended
 Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 14/9/06 No. of Certificate 1076
 Can each boiler be worked separately Yes Area of fire grate in each boiler 32.6 sq ft No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 7.07 sq in Pressure to which they are adjusted 160 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 15 Mean dia. of boilers 12: 3 Length 10: 0 Material of shell plates Steel
 Thickness 3/16 Range of tensile strength 32-35 Are the shell plates welded or flanged Both Descrip. of riveting: cir. seams No
 Longitudinal seams Yes Diameter of rivet holes in long. seams 1 Pitch of rivets 7/16 Lap of plates or width of butt straps 15
 Percentages of strength of longitudinal joint 85-87 Working pressure of shell by rules 164 lbs Size of manhole in shell 16: 12
 No. of compensating ring Flanged No. and Description of Furnaces in each boiler Two Plain Material Steel Outside diameter 45
 Length of plain part 72.5 Thickness of plates 1 1/4 Description of longitudinal joint Welded No. of strengthening rings None
 Working pressure of furnace by the rules 169 lbs Combustion chamber plates: Material Steel Thickness: Sides 19/32 Back 19/32 Top 19/32 Bottom 13/16
 Thickness of stays to ditto: Sides 5/16 Back 5/16 Top 5/16 Bottom 5/16 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 163 lbs
 Material of stays Steel Diameter at smallest part 1 1/2 Area supported by each stay 4 1/2 Working pressure by rules 192 lbs End plates in steam space:
 Material Steel Thickness 1 Pitch of stays 17: 16 How are stays secured Welded Working pressure by rules 164 lbs Material of stays Steel
 Diameter at smallest part 2 1/2 Area supported by each stay 17: 16 Working pressure by rules 167 lbs Material of Front plates at bottom Steel
 Thickness 1 1/4 Material of Lower back plate Steel Thickness 1 1/4 Greatest pitch of stays 16 Working pressure of plate by rules 160 lbs
 Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 15/16 Back 12/16 Mean pitch of stays 9
 Girders across wide water spaces 14 1/2 Working pressures by rules 166 lbs Girders to Chamber tops: Material Steel Depth and
 Thickness of girder at centre 8 1/2 Length as per rule 29 1/2 Distance apart 8 1/2 Number and pitch of stays in each Yes 8: 8
 Working pressure by rules 170 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
 Diameter 12 Length 12 Thickness of shell plates 1 1/4 Material Steel Description of longitudinal joint Welded Diam. of rivet
 Pitch of rivets 7/16 Working pressure of shell by rules 164 lbs Diameter of flue 12 Material of flue plates Steel Thickness 1 1/4
 End plates: Thickness 1 1/4 How stayed Welded
 Working pressure of end plates 164 lbs Area of safety valves to superheater 164 lbs Are they fitted with easing gear Yes

004152-004160 0093

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. in Report Attached hereto

No. One Description Blaker's Patent
 Made at Darlington By whom made Blaker Boiler Works Co. When made 1906 Where fixed Whitby
 Working pressure 80 lb tested by hydraulic pressure to 160 lb Date of test 29/9/06 No. of Certificate 7779 Fire grate area 284 sq ft Description of Stays
 Valves Spring No. of Safety Valves Two Area of each 7.07 sq in Pressure to which they are adjusted 80 lb Date of adjustment 16/10/06
 If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler No Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:—Two top end bolts. Two bottom end bolts. Two main beam bolts. One cut coupling bolt. One cut feed pump valve. One cut bridge pump valve. One cut check valve. 15 pressure piston springs. Piston pins. Bolt nuts.

FOR THE CENTRAL MARINE ENGINE WORKS
 (The foregoing is a correct description,
Wm. B. Gray & Co. Ltd.
 MANAGER. Manufacturer.

Dates of Survey while building
 During progress of work in shops—1906. May. 18. 30. June. 7. 9. 11. 12. 13. 25. 26. 29. July. 3. 4. 7. 9. 10. 13. 16. 17. 18. 19. 20. 26. 27. 30. 31. Aug. 1. 2. 13. 14.
 During erection on board vessel—20. Sept. 5. 6. 7. 11. 12. 13. 14. 17. 18. 19. 20. 25. 26. 28. Oct. 1. 3. 4. 5. 10. 16. 17.
 Total No. of visits 56 Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 25/9/06 Slides 25/9/06 Covers 25/9/06 Pistons 17/9/06 Rods 14/9/06
 Connecting rods 14/9/06 Crank shaft 5/9/06 Thrust shaft 5/9/06 Tunnel shafts 3/10/06 Screw shaft 11/9/06 Propeller 4/9/06
 Stern tube 19/9/06 Steam pipes tested 19/9/06 Engine and boiler seatings 1/10/06 Engines holding down bolts 3/10/06
 Completion of pumping arrangements 5/10/06 Boilers fixed 10/10/06 Engines tried under steam 5/10/06
 Main boiler safety valves adjusted 5/10/06 Thickness of adjusting washers SS 19/16 SP 11/16 PP 11/16 PS 11/16
 Material of Crank shaft Steel Identification Mark on Do. 442P Material of Thrust shaft Steel Identification Mark on Do. 442
 Material of Tunnel shafts Steel Identification Marks on Do. 442P Material of Screw shafts Steel Identification Marks on Do. 442
 Material of Steam Pipes Copper Test pressure 450 lb

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

The Machinery and Boilers of this Steamer have been constructed under Special Survey and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the Notification + L.M.C. 10.06. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD H.M.C. 10.06.

Resd.
22.10.06

The amount of Entry Fee, £ 2 : : When applied for, 20.10.1906
 Special £ 25 : : :
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : : 23/10/06

James James
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

TUES. 23 OCT 1906

Assigned

MACHINERY CERTIFICATE WRITTEN.

© 2021 Lloyd's Register Foundation

West Hartlepool

Certificate (if required) to be sent to

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