

REPORT ON MACHINERY.

No. 12127

SAI. 12 AUG 1905

Port of WEST HARTLEPOOL

Received at London Office

No. in Survey held at West Hartlepool Date, first Survey 28th March 05 Last Survey 23rd May 1905
 Reg. Book. main boiler for Lochrane Houli no. 343 (Number of Visits 44.36)
 on the main boiler for Lochrane Houli no. 343 Tons { Gross
 Master By whom built Lochrane Houli When built 1905 Net
 Engines made at Grimby By whom made when made
 Boilers made at West Hartlepool By whom made Central Marine Engine Mks. when made 1905
 Registered Horse Power Owners Port belonging to
 Nom. Horse Power as per Section 28 71 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines

No. of Cylinders No. of Cranks
 Dia. of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule Material of
 as fitted screw shaft
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight
 in the propeller boss If the liner is in more than one length are the joints burned 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 If two
 liners are fitted, is the shaft lapped or protected between the liners Length of stern bush
 Dia. of Tunnel shaft Dia. of Crank shaft journals as per rule Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under
 as fitted collars Dia. of screw Pitch of screw No. of blades State whether moveable Total surface
 No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
 No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
 No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room In Holds, &c.

No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size
 Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
 Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line
 Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate
 What pipes are carried through the bunkers How are they protected
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight
 Is it fitted with a watertight door worked from

BOILERS, &c.—

(Letter for record S)

Total Heating Surface of Boilers 1146 sq ft Is forced draft fitted Is
 No. and Description of Boilers One Cylindrical Working Pressure 185 lb Tested by hydraulic pressure to 370 lb
 Date of test 22/5/05 Can each boiler be worked separately ✓ Area of fire grate in each boiler 32 sq ft No. and Description of safety valves to
 each boiler 2 Spring loaded Area of each valve 3.98 sq in Pressure to which they are adjusted 190 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 82 Mean dia. of boilers 12.0 Length 10.2 Material of shell plates Steel
 Thickness 1 1/4 Range of tensile strength 27.2 Are they welded or flanged both Descrip. of riveting: cir. seams long. seams
 Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 7 5/16 Lap of plates or width of butt straps 16 1/2
 Per centages of strength of longitudinal joint 84.8 Working pressure of shell by rules 186 lb Size of manhole in shell 16 x 12
 Size of compensating ring 32 x 28 x 1 1/4 No. and Description of Furnaces in each boiler Two Plain Material Steel Outside diameter 41 1/2
 Length of plain part 5.9 Thickness of plates 12 1/16 Description of longitudinal joint Welded No. of strengthening rings —
 Working pressure of furnace by the rules 188 lb Combustion chamber plates: Material Steel Thickness: Sides 12 1/16 Back 14 1/16 Top 14 1/16 Bottom 14 1/16
 Pitch of stays to ditto: Sides 9 1/2 x 9 Back 9 1/2 x 9 Top 9 1/2 x 9 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 191 lb
 Material of stays Steel Diameter at smallest part 1 5/8 Area supported by each stay 9 1/2 x 9 Working pressure by rules 221 lb End plates in steam space:
 Material Steel Thickness 1 1/4 Pitch of stays 17 x 15 1/2 How are stays secured Welded Working pressure by rules 191 lb Material of stays Steel
 Diameter at smallest part 2 1/2 Area supported by each stay 17 x 15 1/2 Working pressure by rules 192 lb Material of Front plates at bottom Steel
 Thickness 1 Material of Lower back plate Steel Thickness 1 5/16 Greatest pitch of stays 14 Working pressure of plate by rules 185 lb
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 1 Back 12 1/16 Mean pitch of stays 9
 Pitch across wide water spaces 14 1/2 Working pressures by rules 189 lb Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9 x 1 1/2 Length as per rule 31 9/16 Distance apart 8 1/4 Number and pitch of Stays in each two 9 1/2
 Working pressure by rules 196 lb 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. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____

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 _____ 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 _____

Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Wm. B. Brown Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1905. Mar. 28. 29. 30. Apr. 3. 5. 6. 7. 10. 11. 12. 13. 14. 17. 18. 19. 20. 26. 27. 28. May 1. 2. 3. 4. 5. 8. 9. 10. 11. 12. 15. 16. 17. 18. 19. 22. 23. }
 { During erection on board vessel - - }
 Total No. of visits *Hpl. 36* *Gas 3* *at Gas. July 28. Aug 1. 3.*

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

" " " donkey " " "

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

Note

This case is similar in all respects to Central Boiler R 122. West Hartlepool Report No. 12626 dated 23rd May, 1905.

This Main Boiler has been constructed under Special Survey in accordance with the approved Photo Print and has been satisfactorily tested by hydraulic pressure and found tight and sound.

This Boiler has been forwarded to Grimsby where it will be placed on board Messrs. Cockburn & Sons S.S. No. 340.

This boiler has been securely fastened on board the steam trawler "James" & the safety valves adjusted under steam.

W. Ritchie.
Gas.

The amount of Entry Fee.. £ :
 Special £ :
 Donkey Boiler Fee £ :
 Travelling Expenses (if any) £ :

When applied for,

23. 5. 05

19. 12. 05

When received,

13. 6. 05

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

Committee's Minute

Assigned

TUES. 15 AUG 1905



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