

REPORT ON MACHINERY.

File No. 12517
Lu No. 22105
FRI, 6 JAN 1905

Port of WEST HARTLEPOOL

No. in Survey held at Hartlepool Date, first Survey 26th May 1904 Last Survey 8th Dec^r 1904
Reg. Book. 60 Sup. on the Steel S.S. "Claremont" (Number of Visits 8)

Master G.W. Turner Built at Sunderland By whom built W. Dofford & Sons Ltd. Tons { Gross 3883
Engines made at Hartlepool By whom made Richardsons, Westgarth & Co. Ltd. Net 2476
Boilers made at Hartlepool By whom made do do When built 1904
Registered Horse Power _____ Owners The Stanley Line Ltd. Port belonging to West Hartlepool
Nom. Horse Power as per Section 28 307 Is Refrigerating Machinery fitted no Is Electric Light fitted no

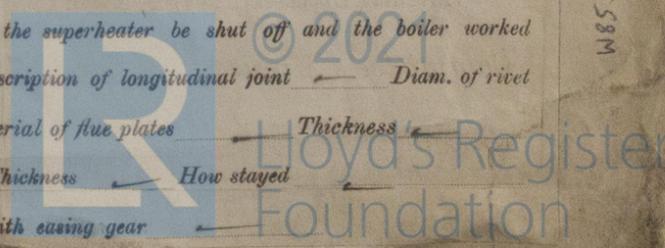
ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders three No. of Cranks three
Dia. of Cylinders 23 1/2 - 39 - 66 Length of Stroke 45 Revs. per minute 60 Dia. of Screw shaft 13 1/2 Material of screw shaft serapi iron
Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight in the propeller boss yes If the liner is in more than one length are the joints burned yes 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 yes If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 4-4
Dia. of Tunnel shaft 11-9/16 Dia. of Crank shaft journals 12-5/16 Dia. of Crank pin 13 Size of Crank webs 8x25 Dia. of thrust shaft under collars 13 Dia. of screw 16-9 Pitch of screw 16-6 No. of blades 4 State whether moveable no Total surface 84.6 sq. ft.
No. of Feed pumps 2 Diameter of ditto 3 Stroke 24 Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work yes
No. of Donkey Engines 2 Sizes of Pumps two 4x6 duplex, Halladay No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room four 3 1/2 dia. In Holds, &c. fore hold two 3 1/2, Main hold two 3 1/2
After hold two 3 1/2, after main hold 3 1/2 Centre, + 2 1/2 Tunnel well—
No. of bilge injections one sizes 5 Connected to condenser, or to circulating pump is 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 yes
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 _____ Is the screw shaft tunnel watertight yes
Is it fitted with a watertight door yes worked from Top platform

BOILERS, &c.— (Letter for record S.) Total Heating Surface of Boilers 4603 sq. ft. Is forced draft fitted no
No. and Description of Boilers two single ended, byl. Mult Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs.
Date of test 16-11-04 Can each boiler be worked separately yes Area of fire grate in each boiler 48.34 sq. ft. No. and Description of safety valves to each boiler two spring direct Area of each valve 4.06 sq. in. Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 12 Mean dia. of boilers 15-9 Length 10-6 Material of shell plates steel
Thickness 1 1/2 Range of tensile strength 28-32 Are they welded or flanged no Descrip. of riveting: cir. seams double long. seams treble
Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 8 5/8 Lap of plates or width of butt straps 18
Per centages of strength of longitudinal joint rivets 86-8 Working pressure of shell by rules 181 lbs. Size of manhole in shell 13 x 16 1/2
Size of compensating ring 29 x 30 x 1 1/2 No. and Description of Furnaces in each boiler 3 Monison Material steel Outside diameter 49 1/2
Length of plain part top 8 bottom 8 Thickness of plates crown 1 1/2 bottom 1 1/2 Description of longitudinal joint weld No. of strengthening rings _____
Working pressure of furnace by the rules 190 lbs. Combustion chamber plates: Material steel Thickness: Sides 1 1/2 Back 1 1/2 Top 1 1/2 Bottom 1 1/2
Pitch of stays to ditto: Sides 4 1/2 x 8 1/2 Back 8 Top 4 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183 lbs.
Material of stays steel Diameter at smallest part 1 3/8 Area supported by each stay 66 sq. in. Working pressure by rules 180 lbs. End plates in steam space: Material steel Thickness 1 Pitch of stays 16 1/2 x 15 1/2 How are stays secured D.N. & M. Working pressure by rules 180 lbs. Material of stays steel
Diameter at smallest part 2 1/2 Area supported by each stay 262 sq. in. Working pressure by rules 180 lbs. Material of Front plates at bottom steel
Thickness 3/4 Material of Lower back plate steel Thickness 25/32 Greatest pitch of stays 12 3/4 Working pressure of plate by rules 186 lbs.
Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 Material of tube plates steel Thickness: Front 1 Back 3/4 Mean pitch of stays 11 1/2
Pitch across wide water spaces 14 1/4 Working pressures by rules 189 lbs. Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8 x 13 Length as per rule 31 Distance apart 8 1/2 Number and pitch of Stays in each two 4 1/2
Working pressure by rules 181 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 _____

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

X see letter dated 1.05.05

040 1853



DONKEY BOILER— No. *one* Description *single ended, horizontal, multi fire plan furnace.*
 Made at *London* By whom made *W. Bradford & Co. (Ld)* When made *1904* Where fixed *deck*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *2304* Fire grate area *30 sq ft* Description of safety valves *Direct opening*
 No. of safety valves *two* Area of each *5.94* 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* Dia. of donkey boiler *9-0* Length *9-0* Material of shell plates *steel* Thickness *1/2* Range of tensile strength *27 1/2 to 32 ton* Descrip. of riveting long. seams *Lap tubular* Dia. of rivet holes *25/32* Whether punched or drilled *drilled* Pitch of rivets *3 1/8*
 Lap of plating *5 1/2* Per centage of strength of joint *88* Rivets *48* Thickness of shell *cross* plates *23/32* Radius of do. *ft* No. of stays to do. *one*
 Dia. of stays. *1 1/8* Diameter of furnace *Top 31 Bottom —* Length of furnace *6-3* Thickness of furnace plates *7/16* Description of joint *Lap angle* Thickness of furnace *cross* plates *15/32 + 1/2* Stays by *1 3/8 + 1 1/4* *cross stay* Working pressure of shell by rules *81 lbs*
 Working pressure of furnace by rules *90 lbs* Diameter of *uptake* tubes *3* Thickness of *uptake* plates *F 23/32* Thickness of *water* tubes *5/16*

SPARE GEAR. State the articles supplied:— *2 bon. rod top + 2 bon. rod bottom end bolt + nuts, 2 Main bearings and one set of coupling bolts, one set of feed bilge + air pump valves, A quantity of assorted bolts nuts + iron, propeller, white metal for one crank pin bush, one valve each for main + donkey feed, check, condenser + 5 boiler tubes + safety valve spring.*

The foregoing is a correct description,
 For **RICHARDSONS, WESTGARTH & CO., LIMITED.**

W. Bradford Manufacturer.
W. Bradford Managing Director.

Dates of Survey while building
 During progress of work in shops: 1904, May, 26, 27, 30, 31, June, 1, 2, 4, 6, 16, 17, 20, 29, July, 5, 27, Sept, 6, 8, 13, 15, 16, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, Oct, 3, 4, 7, 8, 10, 11, 12, 13, 14, 17, 18
 During erection on board vessel: 19, 20, 21, 22, 25, 26, 27, 28, 31, Nov, 2, 4, 5, 9, 10, 11, 14, 15, 16, 18, 21, 22, 23, 24, 28, 29, 30, Dec, 1, 2, 8, — (all) ships 18, 21, boats 4, 10, 13, Nov, 13, Dec, 19, 20.
 Total No. of visits: *70 - (Sld): - 8 = 78.* Is the approved plan of main boiler forwarded herewith *yes*
 " " " donkey " " " *yes*

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

The main steam pipes have been tested by hydraulic pressure to 360 lbs. per sq. in. and found tight. The engines and boilers of this vessel have been built under special survey in accordance with the Rule requirements, the materials and workmanship being good + efficient; When completed and fitted on board were tried under steam at moorings with satisfactory results, and is now eligible, in our opinion, to have +LMC 1204 marked in the Register Book.

It is submitted that this vessel is eligible for THE RECORD, +LMC 1204
JSM 9.1.05
RS 9.1.05

W. Bradford

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

The amount of Entry Fee.. £ 3 :
 Special .. £ 35 : 7 :
 Donkey Boiler Fee *Not paid* £ 2 : 2 :
 Travelling Expenses (if any) £ :

When applied for, *16.12.04*
 When received, *20.12.04*
W. Bradford
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned
 TUES. 10 JAN. 1905
 + L.M.C. 1204

