

REPORT ON MACHINERY.

Port of WEST HARTLEPOOL

FRI. 8 AUG 1902

Survey held at Hartlepool Date, first Survey 12th Feb'y. Last Survey 17th July 1902
No. in g. Book. (No. 15) (Number of Visits 68)

Built at Spezia (Italy) By whom built Cantiere Navale di Muggiana
Engines made at Hartlepool By whom made Richardson, Nestgarth & Co. Ltd.
Boilers made at Hartlepool By whom made Richardson, Nestgarth & Co. Ltd.

Registered Horse Power 356 Owners Is Refrigerating Machinery fitted Is Electric Light fitted

GINES, &c.—Description of Engines Triple expansion No. of Cylinders three No. of Cranks three
Diameter of Cylinders 24"-40"-66" Length of Stroke 48" Revs. per minute 65 Dia. of Screw shaft 1 1/2"
Dia. of Tunnel shaft 12 1/2" Dia. of Crank shaft journals 13 1/2" Dia. of Crank pin 1 1/4" Size of Crank webs 8 1/2" x 19 1/2"
Pitch of screw 17-9" No. of blades 4 State whether moceable no Total surface 85 sq. ft.
Diameter of ditto 3 1/4" Stroke 27" Can one be overhauled while the other is at work yes
Diameter of ditto 3 3/4" Stroke 27" Can one be overhauled while the other is at work yes
SIZES OF PUMPS 1 1/2" x 6" 8 1/2" x 4" No. and size of Suctions connected to both Bilge and Donkey pumps

Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & size
Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
Are they Valves or Cocks Are the discharge pipes above or below the deep water line
Are the blow off cocks fitted with a spigot and brass covering plate How are they protected
Is the screw shaft tunnel watertight

ILERS, &c.— (Letter for record S.) Total Heating Surface of Boilers 4707 sq. ft. Is forced draft fitted yes.
and Description of Boilers 2 Single ended. byl. Mull. Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs.
Can each boiler be worked separately yes Area of fire grate in each boiler 57 sq. ft. No. and Description of safety valves to 360 lbs.
Area of each valve 11 sq. ft. Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear yes
Mean dia. of boilers 14'-9" Length 11'-6" Material of shell plates steel
Range of tensile strength 28/32 Are they welded or flanged no Descrip. of riveting: cir. seams double long. seams treble
Pitch of rivets 8 1/8" Lap of plates or width of butt straps 19"
Working pressure of shell by rules 183 lbs. Size of manhole in shell 13" x 16 1/2"
No. and Description of Furnaces in each boiler 3 Morison Material steel Outside diameter 4 1/2"
Description of longitudinal joint welded No. of strengthening rings 4
Thickness of plates 9/16" Bottom 7/16" Description of longitudinal joint welded No. of strengthening rings 4
Working pressure of furnace by the rules 185 lbs. Combustion chamber plates: Material steel Thickness: Sides 19/32 Back 19/32 Top 19/32 Bottom 24/32
If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183 lbs.
Area supported by each stay 65 sq. ft. Working pressure by rules 180 lbs. End plates in steam space:
Material of stays steel Diameter at smallest part 1 3/8" Pitch of stays 1 1/2" x 1 1/2" How are stays secured D. N. & M. Working pressure by rules 192 lbs. Material of stays steel
Thickness 1 1/2" Pitch of stays 1 1/2" x 1 1/2" How are stays secured D. N. & M. Working pressure by rules 190 lbs. Material of Front plates at bottom steel
Area supported by each stay 258 sq. ft. Working pressure by rules 190 lbs. Working pressure of plate by rules 180 lbs.
Material of Lower back plate steel Thickness 25/32 Greatest pitch of stays 12 1/4" Working pressure of plate by rules 180 lbs.
Material of tube plates steel Thickness: Front 15/16 Back 3/4 Mean pitch of stays 7 1/2"
Working pressures by rules 184 lbs. Girders to Chamber tops: Material Steel Depth and
Distance apart 8" Number and pitch of Stays in each 3-8"
Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked

Foreign Shipping separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
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

Machinery contracted for Sep. 1899.

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:— 2 hon. rod top + 2 con. rod bottom end bolts + nuts, 2 main bearings, + one set of coupling bolts, one set of feed, bilge, air + cir. pump valves, one con. rod bush, 2 safety valve springs, 10 condensers + 12 boiler tubes, one set of Rams. rings for H.P. + L.P. pistons, 1/2 set of fire bars, set of H.P. piston valve springs + propeller.

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

Dates of Survey while building

During progress of work in shops— 1902 Feb. 17, 10, 11, 12, 13, 14, 17, 19, 26. Mar. 1, 3, 4, 6, 7, 10, 11, 12, 13, 14, 15, 17, 20, 21, 24, 25, 26, 27. Apr. 2, 3, 4, 7, 8, 10, 11, 14.

During erection on board vessel— 15, 16, 17, 18, 19, 21, 22, 23, 25, 29 May 2, 3, 5, 7, 9, 13, 14, 15, 16, 21, 22, 24, 26, 27, 28. June 3, 7. July 8, 10, 15, 17.

Total No. of visits 68

Is the approved plan of main boiler forwarded herewith No.

" " " donkey " " "

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

Material of screw shaft Scrap Iron Is 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 in the propeller boss Yes. 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

The engines & boilers have been built under Special Survey, in accordance with the Rule requirements, the materials and workmanship are good & efficient, and, in my opinion, eligible to have notation **L.M.C.** with a date marked in the Register Book, when the following work has been satisfactorily carried out, viz.— The engines & boilers to be efficiently fitted on board, main shafting examined after being set, Main steam pipes tested by hydraulic pressure to 360 lbs. ps. sq. in. Pumping arrangements fitted as per approved plan, Spare gear checked, Shaft tunnel made water tight, Water tight doors fitted, Main boilers examined under steam, safety valves adjusted to 180 lbs. ps. sq. in. and the Machinery to undergo a satisfactory steam trial.

The above machinery & boilers have been shipped out to H.M.S.

The amount of Entry Fee.. £ 3 : : When applied for, 7.8.02

Special (Donkey to fire) £ 15 : : When received, 11.8.02

Donkey Boiler Fee £ 12 : : 10.11.02

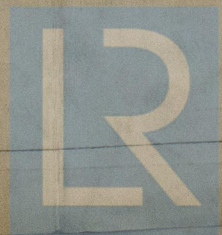
Travelling Expenses (if any) £ : : 19.02

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

Committee's Minute

TUES. 18 NOV 1902

Assigned



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