

REPORT ON MACHINERY.

Port of Newcastle-on-Tyne

Received at London Office TUES. JUL 2 1901

No. in Survey held at North Shields

Date, first Survey Nov. 19 00 Last Survey June 19 01

Reg. Book.

(Number of Visits 29)

290 on the S.S. Pioneer

Tons ^{Gross} 121.49
_{Net} 53.36

Master Eastwood Built at Hull By whom built H. Seave

When built 1901

Engines made at North Shields By whom made Messrs Hedley & Boyd when made 1901

Boilers made at South Shields By whom made Messrs. Eltringham & Co. Ld when made 1901

Registered Horse Power 25 Owners Wetherall Steam Shpg. Co. Ltd Port belonging to Goole

Nom. Horse Power as per Section 28 25 Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Compound Surface Condensing No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 11" x 22" Length of Stroke 16" Revs. per minute 120 Dia. of Screw shaft ^{as per rule} 4.6 Lgth. of stern bush 1.7"
_{as fitted} 4.2 ^{as per rule} 4.4 _{as fitted} 4.3/4

Dia. of Tunnel shaft ^{as per rule} 4 1/2 Dia. of Crank shaft journals ^{as per rule} 4 7/8 Dia. of Crank pin 4 1/8 Size of Crank webs 3 1/2 x 8 1/2 Dia. of thrust shaft under collars 4 5/8 Dia. of screw 5.6" Pitch of screw 2.0" at top 2.0" at bottom 2.0" No. of blades 1 State whether moceable No Total surface 11.6 sq. ft

No. of Feed pumps 1 Diameter of ditto 2" Stroke 2 Can one be overhauled while the other is at work —

No. of Bilge pumps 1 Diameter of ditto 2" Stroke 2 Can one be overhauled while the other is at work —

No. of Donkey Engines 1 Sizes of Pumps Duplex 4 x 2 3/4 x 4" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2" Two In Holds, &c. 2" Two in Fore Hold, one in F. Peak

No. of bilge injections 1 sizes 2" Connected to condenser, or to circulating pump Pump Is a separate donkey suction fitted in Engine room & size 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 Yes

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Cocks

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 Spigot

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 not docked Is the screw shaft tunnel watertight No tunnel

Is it fitted with a watertight door Yes worked from —

BOILERS, &c.— (Letter for record —) Total Heating Surface of Boilers 493 sq. ft Is forced draft fitted No

No. and Description of Boilers 1 Single ended Multitubular Working Pressure 120 Tested by hydraulic pressure to 240 lbs

Date of test 13.3.07 Can each boiler be worked separately — Area of fire grate in each boiler 22 sq. ft No. and Description of safety valves to each boiler 2 Spring loaded Area of each valve 3.1416" Pressure to which they are adjusted 120 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean dia. of boilers 8.5 1/2" Length 8.0" Material of shell plates Steel

Thickness 5/8 Range of tensile strength 29/32 Are they welded or flanged No Descrip. of riveting: cir. seams D.R. Lap long. seams True lap

Diameter of rivet holes in long. seams 1" Pitch of rivets 4 1/8" Lap of plates or width of butt straps 7"

Per centages of strength of longitudinal joint ^{rivets} 78% Working pressure of shell by rules 120 Size of manhole in shell 12" x 16"
_{plate} 76%

Size of compensating ring 7 x 5/8 No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 30"

Length of plain part ^{top} 5.4" Thickness of plates ^{or on} 15/32 Description of longitudinal joint S.R. lap No. of strengthening rings —
_{bottom} 6.11" _{bottom} 17/32

Working pressure of furnace by the rules 128 Combustion chamber plates: Material Steel Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 17/32

Pitch of stays to ditto: Sides 9 x 9 1/4 Back 10 x 9 Top palm stay If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 121

Material of stays Iron Diameter at smallest part 1 1/32 Area supported by each stay 90" Working pressure by rules 165 End plates in steam space:

Material Steel Thickness 3/32 x 1/16 Pitch of stays 15" x 16 1/2" How are stays secured D.N & W Working pressure by rules 121 Material of stays Steel

Diameter at smallest part 2 1/16 Area supported by each stay 247.5" Working pressure by rules 135 Material of Front plates at bottom Steel

Thickness 7/32 Material of Lower back plate Steel Thickness 1/16 Greatest pitch of stays 14 x 9" Working pressure of plate by rules 120

Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 27/32 Back 3/4" Mean pitch of stays 13 1/2 x 9"

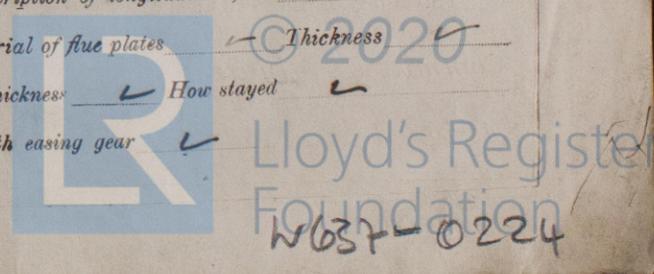
Pitch across wide water spaces 13 3/4 Working pressures by rules 134 Girders to Chamber tops: Material — Depth and thickness of girder at centre — Length as per rule — Distance apart — Number and pitch of Stays in each —

Working pressure by rules — 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? [2000-4/12/00-Copyable Ink.]



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.

Plates 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:— 1 Set of coupling Bolts. 2 Bottom end bolts
 2 Top End & 2 Main Bearing bolts. 1 Set of Feed & 1 set of Bilge Pump Valves
 1 H.P. & 1 L.P. Piston Packing ring
 Assorted bolts & nuts & iron of various sizes

The foregoing is a correct description,

H. L. Thompson Manufacturer. *Hedley & Boyd* Engineers
 Main Works

Dates of Survey while building

During progress of work in shops— Engg. 1901. Jan. 10. 15. 24. 30. Feb. 12. 26. Mch. 14. 21. 28. 19. May. 12. 16. 21. June 10. 14. 19.

During erection on board vessel— Blv. 1900. Nov. 16. 20. 22. 27. Dec. 7. 10. 12. 14. 1901. Jan. 16. 22. Feb. 1. 5. 12. 25. Mch. 12

Total No. of visits 29

Is the approved plan of main boiler forwarded herewith Yes

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

The Machinery of this vessel has been constructed & fitted on board under special survey. The workmanship is sound & good. The machinery has been tried under steam & found satisfactory & in my opinion is eligible to be classed **L.M.C 6.07**, in the Register Book

Material of screw shaft Forged Scrap Iron Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner

Is the after end of the liner made water tight in the propeller boss No 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

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 6.01

PJM C.M. 2.7.01

The amount of Entry Fee... £ 1/8 : : : When applied for, 1 JUL 1901

Special £ 8 : : : When received, 29/12/01

Donkey Boiler Fee £

Travelling Expenses (if any) £

G.A. Dryden Toyns. A.E. Farriner
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. JUL 5 1901

Assigned

+ L.M.C 6.01



© 2020

Lloyd's Register Foundation

Newcastle-on-Tyne.

Certificate (if required) to be sent to

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

MACHINERY CERTIFICATE WRITTEN