

REPORT ON MACHINERY.

No. 46.192

Port of Newcastle on Tyne

Received at London Office FRI. 4 DEC 1903

No. in Survey held at S. Shields.

Date, first Survey April 16 Last Survey Nov 12 1903

7. Book.

(Number of Visits 32)

on the P. S. T. Irlam

Tons ^{Gross} 165
_{Net} 9.67

ster Built at S. Shields By whom built J. P. Remondson & Sons. When built 1913. 11.

ines made at S. Shields By whom made J. P. Remondson & Sons. when made 1903. 11.

ilers made at S. Shields. By whom made J. J. Eltringham and Co. when made 1903. 9.

istered Horse Power Owners Manchester Ship Canal Co. Port belonging to Manchester

n. Horse Power as per Section 22 (66) Is Refrigerating Machinery fitted No. Is Electric Light fitted No.

GINES, &c.—Description of Engines Side Line, Disconnecting No. of Cylinders 2 No. of Cranks 2

r. of Cylinders 30 Length of Stroke 54 Revs. per minute 38 Dia. of Propeller shaft as per rule Material of S. I. shaft as fitted 9 1/2

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

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

rs are fitted, is the shaft lapped or protected between the liners Length of stern bush

of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule 8 3/4 Dia. of Crank pin 5 1/2 Size of Crank webs 10 x 4 1/2 Dia. of thrust shaft under

ars Dia. of whisk 11-7 1/2 Pitch of screw No. of blades 8 State whether moveable - Total surface

of Feed pumps 2. Diameter of ditto 4 Stroke 15 Can one be overhauled while the other is at work One Pump each engine

of Bilge pumps 2 Diameter of ditto 4 Stroke 15 Can one be overhauled while the other is at work One Pump each engine

of Donkey Engines One Sizes of Pumps 5 1/2 - 3 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Fore. 2 - Bore. In Holds, &c. Forward Comp. One 2 - Bore.

Aft. Comp. One 2 - Bore. of bilge injections 2. sizes 2 1/2 Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size 2 - Bore.

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

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

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.

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 Yes

at pipes are carried through the bunkers Air Pump Discharge. How are they protected C. I. Pipe, under deck.

all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes.

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 how used Is the screw shaft tunnel watertight

not fitted with a watertight door worked from

BOILERS, &c.— (Letter for record r.) Total Heating Surface of Boilers 1394 7/8 Is forced draft fitted No.

and Description of Boilers Two Cyl. by alt. Single end. Working Pressure 45 1/2 Tested by hydraulic pressure to 90 1/2

of test 10.9.03. Can each boiler be worked separately Yes. Area of fire grate in each boiler 26 1/2 No. and Description of safety valves to

boiler 2. Opening lead. Area of each valve 8.3. 1/2 Pressure to which they are adjusted 46 1/2 Are they fitted with easing gear Yes

least distance between boilers on uptakes and bunkers of woodwork 10 1/2 Mean dia. of boilers 9-0 7/8 Length 10-4 Material of shell plates S.

thickness 8. 1/4 Range of tensile strength 29 T. Are they welded or flanged Descrip. of riveting: cir. seams L. D. R. long. seams L. D. R.

diameter of rivet holes in long. seams 7/8 Pitch of rivets 3 Lap of plates width of butt straps 4 1/2

percentages of strength of longitudinal joint rivets 90. Working pressure of shell by rules 52. 1/2 Size of manhole in shell 16 x 12

of compensating ring 7 x 3/16 No. and Description of Furnaces in each boiler 2. Plain. Material S. Outside diameter 34

length of plain part top 83. Thickness of plates bottom 13/32 Description of longitudinal joint L. S. R. No. of strengthening rings

working pressure of furnace by the rules 53 1/2 Combustion chamber plates: Material S. Thickness: Sides 7/32 Back 7/16 Top 7/16 Bottom 1/32

height of stays to ditto: Sides 11 1/4 - 11 1/4 Back 11 - 10 Top 13 If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 46 1/2

material of stays I. Diameter at smallest part 1 7/32 Area supported by each stay 132 Working pressure by rules 53 1/2 End plates in steam space:

material S. Thickness 9/16 Pitch of stays 18 - 17 1/2 How are stays secured D. N. W. Working pressure by rules 47 1/2 Material of stays S.

diameter at smallest part 1 1/32 Area supported by each stay 289 Working pressure by rules 52 1/2 Material of Front plates at bottom S.

thickness 9/16 Material of Lower back plate S. Thickness 1/2 Greatest pitch of stays 13 x 10 Working pressure of plate by rules 57 1/2

diameter of tubes 3 1/2 Pitch of tubes 4 7/8 - 4 7/8 Material of tube plates S. Thickness: Front 9/16 Back 9/16 Mean pitch of stays 13 1/8

height across wide water spaces 14 1/2 Working pressures by rules 46 1/2 Girders to Chamber tops: Material same. Depth and

thickness of girder at centre Plate Stay. Length as per rule 152 in. Distance apart 13 Number and pitch of Stays in each

working pressure by rules Superheater on Steam chest; how connected to boiler D. R. Can the superheater be shut off and the boiler worked

separately Diameter 45 E. Length 6 - 9 Thickness of shell plates 3/8 Material S. Description of longitudinal joint L. S. R. Diam. of rivet

7/8 Pitch of rivets 2 1/4 Working pressure of shell by rules 103 1/2 Diameter of flue Material of flue plates Thickness

strengthened with rings Distance between rings Working pressure by rules End plates: Thickness 9/16 How stayed Dished

working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

DONKEY BOILER—

No. *None fitted*

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 casing 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. Main bearing bolts, 2. Crank bolts, 4. Piston bolts, 6. Wheel pins, Fuel and bilge valves, Buckleys, piston ring fitted.*

The foregoing is a correct description,

J. Kennoldson & Son Manufacturer of Engines. *Jos. J. Cunningham & Co.* Managers of Builders.

Dates of Survey while building { During progress of work in shops— *1903. Apr. 16. 28. May 6. 12. 19. 27. June 4. July 9. 16. 20. 24. 28. Aug. 5. 13. 20. 26. 27. 29. Sep. 1. 7. 10. 22. 28. Oct. 1. 6. 7. 16. 22. Nov. 2. 5. 9. 12.*
 During erection on board vessel — —
 Total No. of s *32.*

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

General Remarks (State quality of workmanship, opinions as to class, &c. *These engines and boilers have been constructed and fitted under special survey. The boilers examined under test, in accordance with requirements of rules and found to be satisfactory. This vessel is eligible, in my opinion, for record + L.M.C. 11.03.*

It is submitted that this vessel is eligible for THE RECORD, + L.M.C 11.03.

Bale
4.12.03
W. Lane
4.12.03

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.)

The amount of Entry Fee.. £ *1* : *0* : *0*
 Special £ *9* : *18* : *0*
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, *3 DEC 1903*
 When received, *7 15 1903*

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

Committee's Minute *1UES. 8 DEC 1904*

Assigned *+ L.M.C 11.03*

MACHINERY CERTIFICATE WRITTEN.

