

REPORT ON MACHINERY.

Port of Newcastle on Tyne

No. in Survey held at Newcastle

Date, first Survey Apr 6th

Received at London Office FRI 21 AUG^o 1908

Reg. Book. 7 on the Steel Screw Steg "Wallasey"

Last Survey Aug 14th 1903

(Number of Visits 22)

Master S. Shields Built at S. Shields

By whom built J. J. P. Strickland & Co.

Tons { Gross 149
Net .86

Engines made at S. Shields

By whom made G. J. Grey

When built 1903

Boilers made at S. Shields

By whom made J. J. P. Strickland and Co.

when made 1903

Registered Horse Power 97

Owners Alexandra Towing Co.

when made 21.7.03

Net Horse Power as per Section 28 97

Is Refrigerating Machinery fitted no

Port belonging to Liverpool

Is Electric Light fitted no

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

Di. of Cylinders 16" x 44 1/2" Length of Stroke 27" Revs. per minute 120 Dia. of Screw shaft as per rule 9 1/2" Lgth. of stern bush 3'-1"

Di. of Tunnel shaft as fitted 8 1/2" Dia. of Crank shaft journals as per rule 8 3/4" Dia. of Crank pin 8 5/8" Size of Crank webs 13 x 6 Dia. of thrust shaft under

Di. of screw 9'-8" Pitch of screw 12 1/4" No. of blades 4 State whether moveable no Total surface 36 sq

Di. of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 15" Can one be overhauled while the other is at work yes

Di. of Bilge pumps 2 Diameter of ditto 2 1/4" Stroke 15" Can one be overhauled while the other is at work yes

Di. of Donkey Engines 1 Sizes of Pumps 5 1/4" x 3 1/2" x 5 duplex No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 3 x 2 dia In Holds, &c. Stokehold 1 x 2 dia

Di. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & size yes 2 dia

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 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

Are all pipes carried through the bunkers Main & Auxiliary How are they protected 1/2" steel casing pipes covered with asbestos

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

Were stern tube, propeller, screw shaft, and all connections examined in dry dock yes Is the screw shaft tunnel watertight no tunnel

Is the screw shaft tunnel fitted with a watertight door yes worked from yes

HEATERS, &c.— (Letter for record (5)) Total Heating Surface of Boilers 1560 sq Is forced draft fitted no

Description of Boilers One, Cyl. Mult. Single end. Working Pressure 150 lb Tested by hydraulic pressure to 300 lb

Can each boiler be worked separately yes Area of fire grate in each boiler 57.5 sq No. and Description of safety valves to

boiler 2 Spring loaded Area of each valve 7.06 sq Pressure to which they are adjusted 155 lb Are they fitted with easing gear yes

Least distance between boilers or uptakes and bunkers 7 feet Mean dia. of boilers 14-15 1/2" Length 11'-0" Material of shell plates S

Range of tensile strength 28/T Are they welded or flanged yes Descrip. of riveting: cir. seams 2 1/4" D.R. long. seams D. Butt, T.R.

Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 6 3/4" (4. p.p.) Lap of plates or width of butt straps 15 3/4"

Percentages of strength of longitudinal joint rivets 85 Working pressure of shell by rules 154 lb Size of manhole in shell 16" x 12"

Di. of compensating ring 7 1/2" x 13 1/2" No. and Description of Furnaces in each boiler 3. Hyrium Material S Outside diameter 46"

Di. of plain part top 15 1/2" Thickness of plates crown 15/32" Description of longitudinal joint Weld No. of strengthening rings yes

Working pressure of furnace by the rules 150 lb Combustion chamber plates: Material S Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 1/4"

Di. of stays to ditto: Sides 9 3/4" x 8" Back 8 3/4" x 8 3/4" Top 9" x 8 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 153 lb

Material of stays S Diameter at smallest part 1 1/2" Area supported by each stay 75 sq Working pressure by rules 172 lb End plates in steam space:

Di. of stay 8" Thickness 1" Pitch of stays 17 1/2" - 17 1/2" How are stays secured D.N.W. Working pressure by rules 150 lb Material of stays S

Di. at smallest part 2 1/2" Area supported by each stay 315 sq Working pressure by rules 160 lb Material of Front plates at bottom S

Di. of tubes 3 1/2" E Pitch of tubes 4 3/4" - 4 3/4" Material of tube plates S Thickness: Front 1" Back 13/16" Mean pitch of stays 14 1/2" - 9 1/2"

Di. across wide water spaces 14 3/4" Working pressures by rules 165 lb Girders to Chamber tops: Material S Depth and

Di. of girder at centre 6" x 2 7/8" Length as per rule 31 1/4" Distance apart 8 3/4" Number and pitch of Stays in each 2 - 9"

Working pressure by rules 153 lb Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked

Di. of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet

Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes

Are they lined with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yes

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

DONKEY BOILER— No. _____ Description *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 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 of Pack bolts & nuts for piston rod. Connecting rod & main bearing. 1 set of Coupling bolts & sets of feed & bilge pump valves, assorted bolts, nuts, & iron.*

The foregoing is a correct description,
Jos. D. Ellingham & Co. Manufacturer, of Liverpool G. L. Grey Engine Builder

Dates of Survey while building

During progress of work in shops— During erection on board vessel— Total No. of visits	ENG.: 1903. Apr. 6. May 1. 19. 25. 27. June 5. 16. July 8. 14. 22. 23. 29. Aug. 4. 5. 11. 12. 13. 14.
	B.L.R.: 1903. Apr. 18. 21. May 7. 15. 22. 26. June 8. 9. 15. 18. July 10. 14. 20. 21.
	32

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

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

Material of screw shaft *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 *no*
 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 *no*
 If two liners are fitted, is the shaft lapped or protected between the liners *no*

This boiler, constructed under special survey, is of sound material and workmanship, it has been examined under test, in accordance with rule requirements, and was found to be satisfactory. The machinery of this vessel has been constructed under special survey, the workmanship & material good & eligible in my opinion to have record of + L.M.C. 803.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 803.
Bale.
 21. 8. 03

Certificate (if required) to be sent to Newcastle-on-Tyne.

The amount of Entry Fee..	£ 1 : : :	When applied for,	24 AUG 1903
Special	£ 14 11 : : :	When received,	24. 8. 03
Donkey Boiler Fee	£ . : : :		
Travelling Expenses (if any)	£ . : : :		

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

Committee's Minute *TUES. 25 AUG 1903*
 Assigned *+ June 8, 03*

