

REPORT ON MACHINERY.

No. 23902

Port of Glasgow

TUES. 1 MAY 1906

Received at London Office

No. in Survey held at Glasgow & Paisley

Date, first Survey

Last Survey April 4th 1906

Reg. Book.

(Number of Visits)

50 upon the Steam Tug Pioneer.

Master

Built at Glasgow

By whom built Mac Gregor & Sons

Tons }
Gross }
Net }
When built

Engines made at Paisley

By whom made Fisher & Co

when made 1906

Boilers made at Pollackshaw

By whom made A & H Dalglisk (Bremen)

when made 1906

Registered Horse Power

Owners Pioneer Towing Co

Port belonging to Hull

Nom. Horse Power as per Section 28 37

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

ENGINES, &c.—Description of Engines

Compound

No. of Cylinders 2

No. of Cranks 2

Dia. of Cylinders 13" x 26"

Length of Stroke 18"

Revs. per minute

Dia. of Screw shaft as per rule 5.9"

as fitted 6"

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 —

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 Sealed

Length of stern bush 24"

Dia. of Tunnel shaft as per rule 5.25"

as fitted —

Dia. of Crank shaft journals as per rule 5.5"

as fitted 5.5"

Dia. of Crank pin 5.5"

Size of Crank webs 4"

Dia. of thrust shaft under

collars 5 9/16"

Dia. of screw 6-0"

Pitch of screw 9-6"

No. of blades 4

State whether moveable No

Total surface 16 sq

No. of Feed pumps 1

Diameter of ditto 2"

Stroke 9"

Can one be overhauled while the other is at work —

No. of Bilge pumps 1

Diameter of ditto 2"

Stroke 9"

Can one be overhauled while the other is at work —

No. of Donkey Engines 1

Sizes of Pumps 4 3/4 x 3 x 5

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 - 2"

In Holds, &c. 2 - 2"

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

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 —

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 Before launch Is the screw shaft tunnel watertight —

Is it fitted with a watertight door — worked from None

BOILERS, &c.—No. of Certificate

7753 (Letter for record S) Total Heating Surface of Boilers 753 sq

Is forced draft fitted No

No. and Description of Boilers One, Single Ended Working Pressure 130 lb Tested by hydraulic pressure to 260 lb per sq in

Date of test 1/3/06 Can each boiler be worked separately Yes Area of fire grate in each boiler 29 sq No. and Description of safety valves to each boiler 2 Spring Area of each valve 3.9 sq Pressure to which they are adjusted 135 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 7 stokehold dia. of boilers 9-6" Length 9-0" Material of shell plates Steel

Thickness 25/32 Range of tensile strength 28/32 Are they welded or flanged No Descrip. of riveting: cir. seams DR Lap long. seams Double Straps

Diameter of rivet holes in long. seams 7/8" Pitch of rivets 4 7/8" Lap of plates — width of butt straps 9 1/2"

Per centages of strength of longitudinal joint rivets 88.6 plate 81.0 Working pressure of shell by rules 132 lb Size of manhole in shell 16" x 12"

Size of compensating ring 6" x 2 1/32" No. and Description of Furnaces in each boiler 1 No, plain Material Steel Outside diameter 36"

Length of plain part top 6 9/16" bottom 6 9/16" Thickness of plates crown 9/16" bottom 9/16" Description of longitudinal joint Welded No. of strengthening rings one L

Working pressure of furnace by the rules 130 Combustion chamber plates: Material Steel Thickness: Sides 17/32 Back 17/32 Top 17/32 Bottom 17/32

Pitch of stays to ditto: Sides 8 x 7 1/2" Back 8 x 7 1/2" Top 8 x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 144

Material of stays Steel Diameter at smallest part 1.5" 0 Area supported by each stay 62 0 Working pressure by rules 134 End plates in steam space: Material Steel Thickness 25/32 Pitch of stays 1 1/2 x 1 1/2" How are stays secured Nuts Working pressure by rules 130 lb Material of stays Steel

Diameter at smallest part 2.66" 0 Area supported by each stay 175 0 Working pressure by rules 132 Material of Front plates at bottom Steel

Thickness 25/32 Material of Lower back plate Steel Thickness 25/32 Greatest pitch of stays 13" Working pressure of plate by rules 182 lb

Diameter of tubes 3" Pitch of tubes 4" Material of tube plates Steel Thickness: Front 25/32 Back 19/32 Mean pitch of stays 10"

Pitch across wide water spaces 13" Working pressures by rules 130 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 1/4 x 1" Length as per rule 23 7/8" Distance apart 7" Number and pitch of Stays in each Two, 8"

Working pressure by rules 145 lb 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 —

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Lloyd's Register Foundation

W1550-0228

DONKEY BOILER— No. _____ Description None
 Made at _____ By whom made _____ Date of test _____ 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:— Two top end bolts, 2 bottom end bolts, set of coupling bolts, two main bearing bolts, feed & bilge valves, assorted iron etc.

The foregoing is a correct description,

Manufacturer.

Fisher, No

Dates of Survey while building
 During progress of work in shops— 1905. May 9. 23 Aug 25. 28. 29 Sep 2. 9. 22. 29 Oct 2. 9. 14. 19. 23. 31 Nov 1. 9. 15
 During erection on board vessel— Dec 9. 14. 21. 29 1906. Jan 9. 19. 20. 30 Feb 5. 12. 15. 16. 19. 26 Mar 1. 19. 20 Apr 4.
 Total No. of visits 26 Is the approved plan of main boiler forwarded herewith _____

“ “ “ donkey “ “ “

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

The engines & boiler of this vessel have been constructed under Special Survey & are of good materials & workmanship. They have been securely fitted on board & satisfactorily tried under steam.

This vessel is in my opinion eligible to have notation L.M.C. 4.06 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD L.M.C. 4.06.

1.5.06
2.5.06

Certificate (if required) to be sent to

The amount of Entry Fee... £ 1 : :
 Special ... £ 8 : :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 30 APR 1906 19...
 When received, 31/5/06 4/5/06

J. Gardner Smith & George Murdoch
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute Glasgow 7 APR 1906
 Assigned + L.M.C. 4.06

