

# Lindsay Burns 12 2 918

## REPORT ON MACHINERY.

No. 20925

Port of Glasgow (Yak No. 13661)

Received at London Office

JUN 30 1903

No. in Survey held at Glasgow

Reg. Book.

Date, first Survey 3rd Sept 02 Last Survey 8th Dec 1902(Number of Visits 12)

80 ft on the

Donkey Boiler for the steamer "Mercury"

Tons } Gross

Net

Master

Built at Port GlasgowBy whom built Russell & CoWhen built 1903Engines made at GlasgowBy whom made Rankin & Blackmorewhen made 1903

Boilers made at

By whom made

when made

Registered Horse Power

Owners

Port belonging to Newcastle

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted

Is Electric Light fitted

### ENGINES, &c.—Description of Engines

No. of Cylinders

No. of Cranks

Dia. of Cylinders

Length of Stroke

Revs. per minute

Dia. of Screw shaft

as per rule

as fitted

Material of

screw shaft

Is 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

in 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

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

Dia. of Tunnel shaft

as per rule

as fitted

Dia. of Crank shaft journals

as per rule

as fitted

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

collars

Dia. of screw

Pitch of screw

No. of blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

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

In Engine Room

In Holds, &amp;c.

No. of bilge injections

sizes

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room &amp; size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the discharge pipes above or below the deep water line

Are 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

What pipes are carried through the bunkers

How are they protected

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

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

Is the screw shaft tunnel watertight

Is it fitted with a watertight door

Donkey Boiler

### BOILERS, &c.—

(Letter for record (S))

Total Heating Surface of Boilers

Is forced draft fitted

No. and Description of Boilers

One Single Ended Built

Working Pressure

90 lbs Tested by hydraulic pressure to 180 lbsDate of test 23.2.03 Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of safety valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are they welded or flanged

Descrip. of riveting

cir. seams

long. seams

T. R. Lap

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

plate

Working pressure of shell by rules

Size of manhole in shell

16" x 12"

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Working pressure by rules

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

93 lbs

Material of stays

area

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

area

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

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

Working pressure of end plates

Area of safety valves to superheater

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W608-0186



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:—

The foregoing is a correct description,

LINDSAY BURNET & CO. Manufacturers

Dates of Survey while building During progress of work in shops— 1902: Sep 3. 12. 14. 25. Oct. 9. 21. 29. Nov. 7. 18. 24. Dec 8.

During erection on board vessel —

Total No. of s 11

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

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

This boiler has been constructed under Special Survey & is of good materials & workmanship. It has been sent to Greenock & fitted on board the vessel.

Certificate (if required) to be sent to

The amount of Entry Fee. £ : : When applied for, JUN 22 1903

Special .. .. £ 2 : 2

Donkey Boiler Fee .. .. £ : : When received, 29/6/03

Travelling Expenses (if any) £ : :

Committee's Minute Glasgow 22 JUN 1903

Assigned Transmit to Greenock.

H Gardner-Smith.  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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