

## REPORT ON MACHINERY.

Port of

Glasgow

Received at London Office

MON. 14 OCT 1895

No. in Survey held at  
Reg. Book.

Supplementary Report

Last Survey

18

on the donkey boiler of S.S. Langbank

(Number of Visits)

Master

Built at

By whom built

Tons <sup>Gross</sup>  
Net

When built

Engines made at

By whom made

when made

Boilers made at

Glasgow

By whom made

Dunsmuir &amp; Jackson

when made

1895

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

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

No. of Cylinders

Diameter of Cylinders

Length of Stroke

Revolutions per minute

Diameter of Screw shaft

as per rule

Diameter of Tunnel shaft

as fitted

Diameter of Crank shaft journals

Diameter of Crank pin

Size of Crank webs

as fitted

Diameter 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

worked from

Donkey

## BOILERS, &amp;c.—

(Letter for record S)

Total Heating Surface of Boilers

731 sq ft

No. and Description of Boilers

one Cylindrical

Working Pressure

90 lbs

Tested by hydraulic pressure to

Date of test 11.9.95 Can each boiler be worked separately

Area of fire grate in each boiler

24 sq ft

No. and Description of safety valves to

each boiler two spring loaded

Area of each valve

4'9" sq in

Pressure to which they are adjusted

90 lbs

Are they fitted

with easing gear

y/s

Smallest distance between boilers or uptakes and bunkers or woodwork

Hand clear

Mean diameter of boilers

Length

9' 6"

Material of shell plates

Steel

Thickness

9/16"

Description of riveting: circum. seams

Lap 2 knots

long. seams

Diameter of rivet holes in long. seams

3/16"

Pitch of rivets

3'5 1/8"

Lap of plates or width of butt straps

7"

Per centages of strength of longitudinal joint

rivets

79.6

Working pressure of shell by rules

90"

Size of manhole in shell

12 x 16"

Size of compensating ring

W. Neils

No. and Description of Furnaces in each boiler

two plain

Material

Steel

Outside diameter

33"

Length of plain part

top

3'6"

Thickness of plates

crown

15/32"

Description of longitudinal joint

weld

No. of strengthening rings

none

Working pressure of furnace by the rules

100 lbs

Combustion chamber plates: Material

steel

Thickness: Sides

1/2"

Back

Pitch of stays to ditto: Sides

8 x 9"

Back

8 x 9"

Top

8 x 9"

If stays are fitted with nuts or riveted heads

Material of stays

Steel

Diameter at smallest part

1'0 3/4"

Area supported by each stay

74 sq in

Working pressure by rules

Material

Steel

Thickness

7/8"

Pitch of stays

15 x 13"

How are stays secured

Material of Front plates at bottom

Steel

Thickness

3/4"

Greatest pitch of stays

9"

Working pressure of plate by rules

Diameter of tubes

3 1/4"

Pitch of tubes

4 3/8"

Material of tube plates

Steel

Thickness: Front

Pitch across wide water spaces

14 1/4"

Working pressures by rules

134, 117 lbs

Girders to Chamber tops: Material

Iron

Depth and

thickness of girder at centre

5 1/4 x 2 1/8"

Length as per rule

25 3/4"

Distance apart

9"

Number and pitch of Stays in each

Working pressure by rules

105 lbs

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



# DONKEY BOILER—

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 \_\_\_\_\_  
 Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 Description of riveting long. seams \_\_\_\_\_ Diameter 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,

*Dunmuir & Jackson* Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. For recommendations see Chap. report)

*C. J. Brownlee*

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special .. .. .	£	:	:	.....18.....
Donkey Boiler Fee .. .. .	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	.....18.....

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

Committee's Minute

FRI 18 OCT 1895

FRI 1 NOV 1895

Assigned



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