

## REPORT ON MACHINERY.

July 4353

FRI. 3 AUG 1900

Port of *Newcastle on Tyne*

Received at London Office

No. in Survey held at  
g. Book.*Newcastle*

Date, first Survey

*May 29*

Last Survey

*July 18*

1900

(Number of Visits)

Gross

Net

When built

Master

Built at

By whom built

Engines made at

By whom made

When made

Milers made at

*Newcastle*

By whom made

*R. Stephenson & Co.*

When made

*1900*

Registered Horse Power

Owners

*Bain Son & Co.*

Port belonging to

Horse Power as per Section 28

Is Refrigerating Machinery fitted

Is Electric Light fitted

## ENGINES, &amp;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

Lgth. of stern bush

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

as per rule

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

Milers

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

worked from

## BOILERS, &amp;c.—

(Letter for record (S))

Total Heating Surface of Boilers

*1350*

Is forced draft fitted

☒

No. and Description of Boilers

*One Cyl. Single Ended Working Pressure*

Tested by hydraulic pressure to

*160*

Date of test

*18.7.00*

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

*10.521*

Pressure to which they are adjusted

Are they fitted with easing gear

*yes*

Smallest distance between boilers or uptakes and bunkers or woodwork

*3"*

Mean dia. of boilers

*12-6*

Length

*10-0*

Material of shell plates

*Steel*

Thickness

*5/8*

Range of tensile strength

*27 3/2*

Are they welded or flanged

*no*

Descrip. of riveting: cir. seams

*dl*

long. seams

*D Shap*

Diameter of rivet holes in long. seams

*13/16*

Pitch of rivets

*4.39*

Lap of plates or width of butt straps

*12 7/8*

Per centages of strength of longitudinal joint

plate

*81.5*

Working pressure of shell by rules

*90.9*

Size of manhole in shell

*16 x 12*

Size of compensating ring

*7 x 5/8*

No. and Description of Furnaces in each boiler

*3 plain*

Material

*Steel*

Outside diameter

*36 5/8*

Length of plain part

top

*6.3*

Thickness of plates

crown

*3 1/2*

Description of longitudinal joint

*d Shap*

No. of strengthening rings

*1 half*

Working pressure of furnace by the rules

*98*

Combustion chamber plates: Material

*Steel*

Thickness: Sides

*1/2*

Back

*1/2*

Top

*1/2*

Bottom

*5/8*

Pitch of stays to ditto: Sides

*9 1/2 x 9*

Back

*9 1/2 x 9 1/2*

Top

*9 x 9*

If stays are fitted with nuts or riveted heads

*nut.*

Working pressure by rules

*85*

Material of stays

*Steel*

Diameter at smallest part

*7 1/8*

Area supported by each stay

*90.25*

Working pressure by rules

*87*

End plates in steam space:

Material

*Steel*

Thickness

*3/4*

Pitch of stays

*17 1/2 x 17 1/2*

How are stays secured

*dl & w*

Working pressure by rules

*87*

Material of stays

*Steel*

Diameter at smallest part

*1 7/8*

Area supported by each stay

*306*

Working pressure by rules

*90*

Material of Front plates at bottom

*Steel*

Thickness

*1/8*

Material of Lower back plate

*Steel*

Thickness

*3/4*

Greatest pitch of stays

*as per plan*

Working pressure of plate by rules

*44.80*

Diameter of tubes

*3 3/4*

Pitch of tubes

*4 1/2*

Material of tube plates

*Steel*

Thickness: Front

*1/8*

Back

*1/8*

Mean pitch of stays

*10 1/8*

Pitch across wide water spaces

*14 1/2*

Working pressures by rules

*86*

Girders to Chamber tops: Material

*Steel*

Depth and

thickness of girder at centre

*7 1/2 x 1*

Length as per rule

*27 3/8*

Distance apart

*9*

Number and pitch of Stays in each

*2 - 9*

Working pressure by rules

*122*

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

☒

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Lloyd's Register  
Foundation

PAL138-0014



STRAKES.

AT PLATE KEEL  
Bar Keel, state it  
BOARD OF A S

to actual  
ickness in  
of Double  
Bottom.

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# 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 boiler

enter the donkey boiler

Dia. of donkey boiler

Length

Material of shell plates

Thickness

Range of te

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

Descripti

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,

Manufacturer.

For ROBERT STEPHENSON & CO., LIMITED.

John M. Campbell

Dates  
of Survey  
while  
building

During progress of  
work in shops—  
During erection on  
board vessel—  
Total No. of visits

1900 May 29 June 6 12 15 July 5 10 11 18

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 built under special Survey  
the material & workmanship is good.  
This vessel does not appear to be classed.  
The boiler has been sent to Messrs Bain Sons & Co.  
Portreath, Redruth Cornwall

It is submitted that as this boiler  
is intended for an unclassified vessel  
no further action need be taken

The amount of Entry Fee... £  
Special ... £  
Donkey Boiler Fee ... £  
Travelling Expenses (if any) £

When applied for,

2 AUG 1900

When received,

7 8 1900

Committee's Minute

TUES. 30 OCT 1900

Assigned

not for classing Amstruth

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



Lloyd's Register  
Foundation