

# REPORT ON MACHINERY.

No. 23136

Port of

Newcastle

WED 14

AUGUST

Received at London Office

No. in Survey held at  
Reg. Book.

Newcastle

Date, first Survey 16 Augt 1888

Last Survey

July 27<sup>th</sup> 1889

(Number of Visits 49)

Tons

2307

1519

Master J. Rice

Built at Newcastle

By whom built

R. Stephenson & Co

When built

1889

Engines made at

Newcastle

By whom made

R. Stephenson & Co

when made

1889

Boilers made at

Newcastle

By whom made

when made

1889

Registered Horse Power 200

Owners

J. Wilson Sons & Co

Port belonging to

Hull

## ENGINES, &c.

Description of Engines

Triple expansion on three cranks

Diameter of Cylinders

22.35.39

Length of Stroke

39

No. of Rev. per minute

70

Point of Cut off, High Pressure

.6

Low Pressure

.6

Diameter of Screw shaft

10 1/4

Diam. of Tunnel shaft

10 1/4

Diam. of Crank shaft journals

10 3/4

Diam. of Crank pin

10 3/4

size of Crank webs

13 x 8

Diameter of screw

15.9

Pitch of screw

16.0617.0

No. of blades

4

state whether moveable

Yes

total surface

60 sq

No. of Feed pumps

2

diameter of ditto

3

Stroke

21

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

diameter of ditto

4

Stroke

21

Can one be overhauled while the other is at work

Yes

Where do they pump from

Port from sea - bilge (13) tanks, hold well - Star? Same except sea

No. of Donkey Engines

Two

Size of Pumps

10 x 10 + 6 x 8

Where do they pump from

Ballast from all tanks, hold

Are all the bilge suction pipes fitted with roses

Yes

Are the roses always accessible

Yes

Are the sluices on Engine room bulkheads always accessible

Yes

No. of bilge injections

one

and sizes

5

Are they connected to condenser for circulating pump

Yes

How are the pumps worked

by lines over condenser from after engine

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

Yes

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

Yes

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges

Yes

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

Yes

Is the screw shaft tunnel watertight

Yes

and fitted with a sluice door

Yes

worked from

top platform

## OILERS, &c.

Number of Boilers

Two

Description

Cyl. Single ended

Whether Steel or Iron

Steel

Working Pressure

160 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

May 31<sup>st</sup> 1889 No 2867

Description of superheating apparatus or steam chest

none

Can each boiler be worked separately

Yes

Can the superheater be shut off and the boiler worked separately

Yes

No. of square feet of fire grate surface in each boiler

94.5 sq

Description of safety valves

spring

No. to each boiler

two

Area of each valve

7.66 sq

Are they fitted with easing gear

Yes

No. of safety valves to superheater

Yes

area of each valve

Yes

Are they fitted with easing gear

Yes

Smallest distance between boilers and bunkers or woodwork

13

Diameter of boilers

13.3

Length of boilers

10.3

description of riveting of shell long. seams

d b t 22

circum. seams

d b t lap

Thickness of shell plates

1 3/16

Diameter of rivet holes

1 3/16

whether punched or drilled

drilled

pitch of rivets

5 1/2 + 8 5/16

Lap of plating

23 x 16 straps

Percentage of strength of longitudinal joint

83.45

working pressure of shell by rules

162

size of manholes in shell

16 x 12

Size of compensating rings

7 x 1 1/4

No. of Furnaces in each boiler

Three

Outside diameter

38

length, top

70 x 3

bottom

flue

thickness of plates

17/32

description of joint

Yes

if rings are fitted

Yes

Greatest length between rings

Yes

working pressure of furnace by the rules

171

combustion chamber plating, thickness, sides

9/16

back

9/16

top

9/16

Pitch of stays to ditto, sides

7 1/2

back

7 1/2

top

7 1/2

If stays are fitted with nuts or riveted heads

Yes

working pressure of plating by

rules

rules

172

Diameter of stays at smallest part

1 1/4

working pressure of ditto by rules

174

end plates in steam space, thickness

176

Pitch of stays to ditto

15 1/2

smallest part

2 1/2

how stays are secured

d n o w

working pressure by rules

174

diameter of stays at

smallest part

Greatest pitch of stays

11

working pressure by rules

160

Diameter of tubes

3 3/8

pitch of tubes

4 3/4

thickness of tube

Yes

how stayed

tubes

pitch of stays

appropian

width of water spaces

10 1/2

diam. of rivet holes

Yes

Pitch of rivets

Yes

working pressure of shell by rules

Yes

diameter of flue

Yes

thickness of plates

Yes

If stiffened with rings

Yes

how stayed

Yes

Yes

Distance between rings

Yes

working pressure by rules

Yes

end plates of superheater, or steam chest; thickness

Yes

how stayed

Yes

Yes

Superheater or steam chest; how connected to boiler

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes



## DONKEY BOILER—

Description *Cyl. Single ended - Steel -*Made at *Newcastle*

by whom made

*Nicholson Bros*when made *17.5.89* where fixed *etc etc*Working pressure *90 lb*tested by hydraulic pressure to *180 lb*No. of Certificate *284 5*fire grate area *26 sq*

valves

*spring*No. of safety valves *two*area of each *4.910*if fitted with easing gear *yes*

if steam from main boilers can

description of safe

enter the donkey boiler *no*diameter of donkey boiler *8.0*length *8.6*description of riveting *lap & 2*Thickness of shell plates *3/16*diameter of rivet holes *3/8*whether punched or drilled *a*pitch of rivets *3 1/4*lap of plating *5 1/2*per centage of strength of joint *73*thickness of *end* plates *3/8*stayed by *1 1/8 iron stays 12" pitch*Diameter of furnace, top *2.4*bottom *1*length of furnace *7.6*thickness of plates *1/2 & 3/16*description of joint *butt strap*Thickness of furnace crown plates *3/16*stayed by *stays*working pressure of shell by rules *91.9*Working pressure of furnace by rules *103*diameter of uptake *✓*thickness of plates *✓*thickness of water tubes *✓*

SPARE GEAR. State the articles supplied:—

*Screw shaft, 3 propeller blades, air pump bracket, and  
 head valve, eccentric rod, 2 valve spindles, 2 eccentric straps, four bottom end bases,  
 shaft & pin for air pump, 2 top end bolts, 2 bottom end bolts, 2 main bearing bolts, 8  
 coupling bolts, valve of air valves, piston springs, packing rings for W.P. water cyl, safety  
 valve springs (2) 6 studs for propeller blades, bolts & nuts  
 and ordinary engine room outfit.*

The foregoing is a correct description,

FOR ROBERT STEPHENSON & CO. L<sup>rs</sup>

Manufacturer.

*George Stephenson* Managing Director

## General Remarks

(State quality of workmanship, opinions as to class, &amp;c.)

*The machinery of this vessel has  
 been constructed under special survey, the materials & workmanship are  
 sound and good & eligible in my opinion to have the certification  
 + L.M.C. 7.89 in the Register Book.*

*Owing to an accident to a joint the safety valves of the  
 donkey boiler were not adjusted, arrangements were made to have  
 this done in Hamburg on the vessel's arrival & the local surveyor  
 has been advised.*

Heating surface *3000 sq**8 1/4**2 1/4*

*It is submitted that this vessel is  
 eligible to have + L.M.C. 7.89.  
 recorded: H.A.*

The amount of Entry Fee

Special

Donkey Boiler Fee

Certificate (if required)

To be sent as per margin.

(Travelling Expenses if any, £)

Committee's Minute

FRIDAY 23 AUGUST 1889

*+ L.M.C. 7.89*

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



Lloyd's Register Foundation