

REPORT ON MACHINERY.

Port of **NEWCASTLE-ON-TYNE**

Received at London Office

No. in Survey held at **Louth Shields**Date, first Survey **5th March**Last Survey **July 1897**

1897

Reg. Book.

S.S. ROVER

(Number of Visits)

on the **Main Boiler of the Blyth Cooperative Co. No 36 S/S**Tons { Gross
Net

Master

Built at

By whom built

When built

Engines made at

By whom made

when made

Boilers made at **Louth Shields**By whom made **J. Y. Urringham & Co.**when made **1894-7.**

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

Is Electric Light fitted

ENGINES, &c.—Description of Engines

No. of Cylinders

No. of Cranks

Diameter of Cylinders

Length of Stroke

Revolutions per minute

Diameter of Screw shaft

as per rule

Diameter of Tunnel shaft

as per rule

Diameter of Crank shaft journals

Diameter of Crank pin

Size of Crank webs

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, &c.

No. of bilge injections

sizes

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room & 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, &c.—

(Letter for record **S**)

Total Heating Surface of Boilers

687 ft²

Is forced draft fitted

No. and Description of Boilers

One 4 ft. Single Ended BoilerWorking Pressure **180 lbs**Tested by hydraulic pressure to **260 lbs**Date of test **9/4/97** 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 diameter of boilers

Length

Material of shell plates

Steel

Thickness

13/16"

Description of riveting: circum. seams

lap 2 inlong. seams **lap 3 in**

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

5"

Lap of plates on width of butt straps

8 3/4"

Percentages of strength of longitudinal joint

rivets

76

Working pressure of shell by rules

135 lbs

Size of manhole in shell

12" x 16"

Size of compensating ring

7 x 13 1/2"

No. and Description of Furnaces in each boiler

2. plain

Material

Steel

Outside diameter

36"

Length of plain part

top **5' 7 1/2"**bottom **8' 0"**

Thickness of plates

crown **19/32"**

Description of longitudinal joint

long riv lap

No. of strengthening rings

none

Working pressure of furnace by the rules

153

Combustion chamber plates: Material

Steel

Thickness: Sides

1 1/2"

Back

1 1/2"

Top

1 1/2"

Bottom

2 1/2"

Pitch of stays to ditto: Sides

9 1/2 x 4

Back

9 1/2

Top

rad

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

135

Material of stays

Steel

Diameter at smallest part

2 1/2"

Area supported by each stay

8 1/2 ft²

Working pressure by rules

138

End plates in steam space:

Material

Steel

Thickness

2 1/2"

Diameter at smallest part

2 7/8"

Area supported by each stay

3940

Working pressure by rules

130

Material of Front plates at bottom

Steel

Thickness

3/4"

Greatest pitch of stays

12" x 9 1/2"

Working pressure of plate by rules

135 lbs

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/8 x 4 3/4"

Material of tube plates

Steel

Thickness: Front

29/32"

Back

23/32"

Mean pitch of stays

11' 5"

Pitch across wide water spaces

14"

Working pressures by rules

150.

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of Stays in each

14"

Working pressure by rules

135

Superheater

none

Steam chest; how connected to boiler

over

Can the superheater be shut off and the boiler worked

separately

Diameter

3-0

Length

3-9

Thickness of shell plates

9/16"

Material

Steel

Description of longitudinal joint

DR lap

Diam. of rivet

7/8"

Pitch of rivets

3"

Working pressure of shell by rules

143 lbs

Diameter of flue

9"

Material of flue plates

Steel

Thickness

3/4"

How stayed

rad

Working pressure of end plates

109 lbs

Area of safety valves to superheater

none

Are they fitted with easing gear

yes

Lloyd's Register

Foundation

W1481-0179

DONKEY BOILER— 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 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,

John G. Eltringham Manufacturer of Boilers
 - 1897 - Mar 5 11 29 April 12 15 27 May 3 18 29 June 14 18 July 9 16

Dates { During progress of work in shops - -
 of Survey { During erection on board vessel - -
 while building { Total No. of visits 13

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

This main boiler has been built under special survey and has been fitted on the above vessel. The materials and workmanship are good. The boiler has been subject to test by hydraulic pressure to 260 lbs per sq in in my presence and was found sound and tight.

This Boiler appears to have been constructed under special survey; but as it does not appear to be intended for a closed vessel it is submitted that no further action need be taken.

This boiler has now been put on board the Screw tug "Charles" at Amsterdam Jan 1903. The tubes were examined & boiler was examined by the Surveyors who state boiler is in good condition with very little signs of wear. It was tested to 220 & found tight.

The amount of Entry Fee.. £ : : When applied for
 Special .. £ 2 : 5 : 9 9 18 97
 Donkey Boiler Fee .. £ : : When received
 Travelling Expenses (if any) £ : : 17 9 19 97

Committee's Minute

Assigned

not for Council

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



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