

REPORT ON MACHINERY.

See Rep 16646

No. 7052

Port of *Newcastle*

Received at London Office

No. in Survey held at *Newcastle & Sunderland*
Reg. Book.

Date, first Survey *1st Feb* by *14*

Last Survey *15 Aug 1892*

(Number of Visits *29*)

on the *S.S. Warranboro*

Master *J. E. Elbery* Built at *Sunderland* By whom built *Sunderland Ship Co*

Engines made at *Newcastle* By whom made *Wigham Richardson & Co* When built *1892*

Boilers made at *do* By whom made *do* when made *1892*

Registered Horse Power *500* Owners *M. Lund*

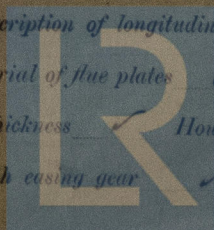
Port belonging to *London*

Nom. Horse Power as per Section 28 *448*

ENGINES, &c.— Description of Engines *Triple expansion in 3 cranks* No. of Cylinders *Three*
Diameter of Cylinders *28.46.73* Length of Stroke *54* Revolutions per minute *65* Diameter of Screw shaft *as per rule 13.4*
Diameter of Tunnel shaft *as per rule 12.8* Diameter of Crank shaft journals *13 3/4* Diameter of Crank pin *13 3/4* Size of Crank webs *8 7/8 x 20*
Diameter of screw *17.0* Pitch of screw *21.0* No. of blades *4* State whether moveable *Ys* Total surface *86 sq*
No. of Feed pumps *2* Diameter of ditto *Ys* Stroke *Ys* Can one be overhauled while the other is at work *Ys*
No. of Bilge pumps *2* Diameter of ditto *4 1/4* Stroke *28"* Can one be overhauled while the other is at work *Ys*
No. of Donkey Engines *Two* Sizes of Pumps *4 x 9 x 9 7/8* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *Star: 2 1/2 Centre 3" Port 2 1/2* In Holds, &c. *Fore hold Port 2 1/2 Star: 2 1/2 Mean*
hold Port 2 1/2 Star: 2 1/2 After main hold Port 2 1/2 Star: 2 1/2 After hold 2 1/2 Forward hold 2 1/2
No. of bilge injections *1* sizes *4* Connected to condenser, or to circulating pump *Ys* Is a separate donkey suction fitted in Engine room & size *Ys 4"*
Are all the bilge suction pipes fitted with roses *Ys* Are the roses in Engine room always accessible *Ys* Are the sluices on Engine room bulkheads always accessible *Ys*
Are all connections with the sea direct on the skin of the ship *Ys* Are they Valves or Cocks *both*
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *Ys* 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 *Ys* Are the blow off cocks fitted with a spigot and brass covering plate *Ys*
What pipes are carried through the bunkers *Main steam &c* How are they protected *wrot. iron tubing*
Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times *Ys*
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *Ys*
When were stern tube, propeller, screw shaft, and all connections examined in dry dock *new* Is the screw shaft tunnel watertight *Ys*
Is it fitted with a watertight door *Ys* worked from *top platform*

BOILERS, &c.— (Letter for record *5*) Total Heating Surface of Boilers *7604 sq*
No. and Description of Boilers *Two - cyl. dble ended* Working Pressure *133lb* Tested by hydraulic pressure to *310lb*
Date of test *5.7.92* Can each boiler be worked separately *Ys* Area of fire grate in each boiler *110 sq* No. and Description of safety valves to
each boiler *two - spring* Area of each valve *12.5 sq* Pressure to which they are adjusted *158lb* Are they fitted
with easing gear *Ys* Smallest distance between boilers or uptakes and bunkers or woodwork *about 3 feet* Mean diameter of boilers *14.11*
Length *16.0* Material of shell plates *slut* Thickness *1 1/16* Description of riveting: circum. seams *d & the Lap* long. seams *d b & the 2*
Diameter of rivet holes in long. seams *1 3/8* Pitch of rivets *7 7/8 x 3 1/2* Lap of plates or width of butt straps *21*
Per centages of strength of longitudinal joint *85* Working pressure of shell by rules *157* Size of manhole in shell *16 x 12*
Size of compensating ring *32 x 27 x 1 1/2* No. and Description of Furnaces in each boiler *Eight - plain* Material *slut* Outside diameter *36 1/4*
Length of plain part *top 5.9 bottom 5.9* Thickness of plates *top 3/8 bottom 1/2* Description of longitudinal joint *d b strap* No. of strengthening rings *Ys*
Working pressure of furnace by the rules *135* Combustion chamber plates: Material *slut* Thickness: Sides *3/8* Back *Ys* Top *3/8* Bottom *1/16*
Pitch of stays to ditto: Sides *8 x 8 3/4* Back *Ys* Top *8 3/4* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *176*
Material of stays *slut* Diameter at smallest part *1 3/8* Area supported by each stay *60* Working pressure by rules *169* End plates in steam space:
Material *slut* Thickness *1* Pitch of stays *15 3/16* How are stays secured *d nut* Working pressure by rules *200* Material of stays *slut*
Diameter at smallest part *2 1/4* Area supported by each stay *232 sq* Working pressure by rules *135* Material of Front plates at bottom *slut*
Thickness *1/16* Material of Lower back plate *Ys* Thickness *Ys* Greatest pitch of stays *Ys* Working pressure of plate by rules *Ys*
Diameter of tubes *3 1/2* Pitch of tubes *4 3/4 x 4 3/8* Material of tube plates *slut* Thickness: Front *13/16* Back *27/32* Mean pitch of stays *as plain*
Pitch across wide water spaces *14 1/2* Working pressures by rules *135* Girders to Chamber tops: Material *slut* Depth and
thickness of girder at centre *9 3/8 x 7 1/2 dble* Length as per rule *36* Distance apart *8 3/4* Number and pitch of Stays in each *3. 8"*
Working pressure by rules *135* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler worked
separately *Ys* Diameter *Ys* Length *Ys* Thickness of shell plates *Ys* Material *Ys* Description of longitudinal joint *Ys* Diam. of rivet
holes *Ys* Pitch of rivets *Ys* Working pressure of shell by rules *Ys* Diameter of flue *Ys* Material of flue plates *Ys* Thickness *Ys*
If stiffened with rings *Ys* Distance between rings *Ys* Working pressure by rules *Ys* End plates: Thickness *Ys* How stayed *Ys*
Working pressure of end plates *Ys* Area of safety valves to superheater *Ys* Are they fitted with easing gear *Ys*

SLD982 - 0046



Lloyd's Register
Foundation

DONKEY BOILER—

Description

Cetus - (stul)

Made at *Guthrie*

By whom made

Clark Chapman & Co

When made

13/5/92

Where fixed

stockhold

Working pressure

80 lb

tested by hydraulic pressure to

160

No. of Certificate

3876

Fire grate area

28 sq

Description of safety valves

spring

No. of safety valves

two

Area of each

5.9 sq

Pressure to which they are adjusted

80 lb

If fitted with casing gear

yes

If steam from main boilers can enter the donkey boiler

no

Diameter of donkey boiler

7.0

Length

14.0

Material of shell plates

ldr

Thickness

15/32

Description of riveting long seams

lap dth riv

Diameter of rivet holes

7/8

Whether punched or drilled

d

Pitch of rivets

3 7/16

Lap of plating

4 1/4

Per centage of strength of joint

68

Thickness of shell crown plates

7/8

Radius of do.

5.0

No. of stays to do.

9

Dia. of stays

2

Diameter of furnace Top

3.6

Bottom

6.4

Length of furnace

4.3

Thickness of furnace plates

5/8

Description of joint

sl

Thickness of furnace crown plates

9/16

Stayed by

as shell crown

Working pressure of shell by rules

80

Working pressure of furnace by rules

80

+ stayed

Diameter of uptake

1 1/2

Thickness of uptake plates

3/16

Thickness of water tubes

3/16

SPARE GEAR.

State the articles supplied:—

Air pump rod bucket & head valve, circulation pump rod & bucket, 2 cast steel propeller blades, pan crank pin brace, 2 main bearing bolts, 2 top end bolts, 2 bottom end bolts, 8 coupling bolts, 2 feed & blow pump valves, safety valve springs, piston springs

The foregoing is a correct description,

and bolts both plain & bar iron & ordinary

Lynch & Richardson & Co

Manufacturer.

Engine room outfit

General Remarks

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

The machinery of this vessel has been constructed under Special Survey the materials and workmanship are sound and good and eligible in my opinion for completion to be classed + L M C 8.92 in the Society Register Book.

The vessel proceeded to Sunderland to complete and the following remained to be done viz, sections to after hold stowed well coupled up and the donkey roller examined in place & safety valves adjusted.

The above mentioned work has been satisfactorily completed

Paul Salmon.

MACHINERY CERTIFICATE

Certificate (if required) to be sent to

The amount of Entry Fee..

£

3

:

0

:

0

When applied for,

Special

£

12

:

0

:

0

:

0

:

0

When received,

Donkey Boiler Fee

£

1

:

0

:

0

:

0

When received,

Travelling Expenses (if any)

£

0

:

0

:

0

When received,

Committee's Minute

TUES. 6 SEP 1892

Assigned

+ L M C 8.92

Paul Salmon

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



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