

REPORT ON MACHINERY.

Port of GlasgowReceived at London Office 10 JUN 1902No. in Survey held at Glasgow
Reg. Book.Date, first Survey 25 Nov '01 Last Survey 29 May 1902(Number of Visits 3)

on the

S. S. Annie.Tons { Gross 371.59
Net 82.15When built 1902Master J. R. H. H. H.

Built at

Ayr

By whom built

Aikard & Co. Ltd.

Engines made at

Glasgow

By whom made

Ross & Duncan.when made 1902

Boilers made at

Glasgow

By whom made

Ross & Duncan.when made 1902

Registered Horse Power

Owner

William RowlandPort belonging to Liverpool

Nom. Horse Power as per Section 28

93.8

Is Refrigerating Machinery fitted

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Compound Surface Cond.

No. of Cylinders

2No. of Cranks 2

Dia. of Cylinders

20" x 22"

Length of Stroke

27"

Revs. per minute

100

Dia. of Screw shaft

8" x 6"Lgth. of stern bush 3' 1"

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

as per rule

Dia. of Crank pin

8 1/2"

Size of Crank webs

12 1/2" x 5 1/2"

collars

8 1/2"

Dia. of screw

9" x 9"

Pitch of screw

12" 0"

No. of blades

14

State whether moveable

No. of Feed pumps

2

Diameter of ditto

3 1/2"

Stroke

13 1/2"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2"

Stroke

13 1/2"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

one

Sizes of Pumps

6" x 4" x 6"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

2- 2 1/2"1- 2" D. S. B.

In Holds, &c.

2- 2"

No. of bilge injections

1

sizes

4"Connected to condenser, or to circulating pump Circ. P. a separate donkey suction fitted in Engine room & size 1- 2"

Are all the bilge suction pipes fitted with roses

yes

Are the roses in Engine room always accessible

yes

Are the sluices on Engine room bulkheads always accessible

yes

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 and all boiler mountings accessible at all times

yes

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

yes

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

on slipway

Is the screw shaft tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

yes

BOILERS, &c.—

(Letter for record S)

Total Heating Surface of Boilers

1621.5

Is forced draft fitted

No. and Description of Boilers

1 cyl. built single ended

Working Pressure

130 lbs

Tested by hydraulic pressure to

260

Date of test

15-4-02

Can each boiler be worked separately

yes

Area of fire grate in each boiler

52

No. and Description of safety valves to

each boiler

2 Direct Spring

Area of each valve

4"

Pressure to which they are adjusted

135 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or accommodation

6' 0"

Mean dia. of boilers

13' 6"

Length

10' 0"

Material of shell plates

steel

Thickness

7/8"

Range of tensile strength

27-32

Are they welded or flanged

no

Descrip. of riveting: cir. seams

lap D. R. long. seams D. R. Y. R.

Diameter of rivet holes in long. seams

1"

Pitch of rivets

6 1/2"

Lap of plates or width of butt straps

15 1/2"

Per centages of strength of longitudinal joint

86.5

Working pressure of shell by rules

131 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

6 1/2" x 7"

No. and Description of Furnaces in each boiler

3 plain

Material

steel

Outside diameter

14 1/2"

Length of plain part

top 6' 6"

Thickness of plates

bottom 8' 9"

Description of longitudinal joint

weld

No. of strengthening rings

partial at bottom

Working pressure of furnace by rules

146 lbs

Combustion chamber plates: Material

steel

Thickness: Sides

12"

Back

12"

Pitch of stays to ditto: Sides

7 1/2" x 7 1/2"

Back

7 1/2" x 7 1/2"

Top

7 1/2" x 7 1/2"

If stays are fitted with nuts or riveted heads

nuts

Material of stays

steel

Diameter at smallest part

1 1/2"

Area supported by each stay

60"

Working pressure by rules

132 lbs

Material

steel

Thickness

3/8"

Pitch of stays

17 1/2" x 17 1/2"

How are stays secured

Donkey

Diameter at smallest part

2 1/4"

Area supported by each stay

298"

Working pressure by rules

142 lbs

Material of Front plates at bottom

steel

Thickness

5"

Material of Lower back plate

steel

Thickness

5"

Greatest pitch of stays

15"

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

steel

Thickness: Front

11" x 5"

Pitch across wide water spaces

15"

Working pressures by rules

140

Girders to Chamber tops: Material

iron

Depth and

thickness of girder at centre6 1/2" x 1 1/2"

Length as per rule

28 3/4"

Distance apart

7 1/2"

Number and pitch of Stays in each

27 1/2"

Working pressure by rules

143 lbs

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

yes

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

End plates: Thickness

How stayed

If stiffened with rings

Distance between rings

Working pressure by rules

Area of safety valves to superheater

Are they fitted with easing gear

yes

Working pressure of end plates

143 lbs

Area of safety valves to superheater

Are they fitted with easing gear

yes

Working pressure of end plates

143 lbs

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143 lbs

Area of safety valves to superheater

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yes

Working pressure of end plates

143 lbs

Area of safety valves to superheater

Are they fitted with easing gear

yes

DONKEY BOILER— No. Description *None.*

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 _____
Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile 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 _____ 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:— *2. Main bearing bolts. 1 set of coupling bolts. 2 Cou Rod bolts & nuts. 2 Piston Rod bolts & nuts. 1 Set of feed pump valves. 1 Set of bilge pump valves. 20 assorted bolts & nuts. 35 Firebars. & an assortment of iron tools.*

The foregoing is a correct description,
Ross & Duncan Manufacturer.

Dates of Survey while building { During progress of work in shops— 1901: Nov. 15. Dec. 4. 9. 1902: Jan. 10. 20. 23. 29. Feb. 3. 11. 14. 19. 21. 24.
During erection on board vessel — Mar. 4. 10. 11. 14. 18. 21. 27. Apr. 7. 15. 18. 25. May. 5. 9. 13. 15. 21. 27. 29.
Total No. of visits *31.*

Is the approved plan of main boiler forwarded herewith *no*

" " " donkey " " " *no*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been tested & constructed under Special Survey & is, in my opinion eligible to have record of L.M.C. 5-02.*

Material of screw shaft *Scrap iron* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *no*

Is the after end of the liner made water tight in the propeller boss *yes*. If the liner is in more than one length are the joints burned *✓*

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *✓* If two liners are fitted, is the shaft lapped or protected between the liners *no*

Materials have been tested. the workmanship is of good quality. & machinery securely fastened on board. & tried under steam with satisfactory results.

It is submitted that
this vessel is eligible for
THE RECORD — L M C 5-02

L.M.

The amount of Entry Fee £ 1 : : When applied for, *6/10/02*
Special £ 14 2 : : *19/02/02*
Donkey Boiler Fee £ : : When received, *11/01/02*
Travelling Expenses (if any) £ 3 : : *19/02/02*

Committee's Minute *Glasgow. 9-JUN 1902*

Assigned

MACHINERY CERTIFICATE
WRITTEN 14/6/02

When fee paid

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



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Foundation