

Port of

Belfast

Received at London Office

31.14 OCT 1905-10

No. in Survey held at  
Reg. Book.

Belfast

Date, first Survey March 21

Last Survey Oct 10 1905

(Number of Visits 52)

on the

S.S. Operator

Gross 3578

Net 2282

Master

Built at

Belfast

By whom built

Workman Clark &amp; Co. Ltd.

When built

1905

Engines made at

Belfast

By whom made

Workman Clark &amp; Co. Ltd.

when made

1905

Boilers made at

By whom made

when made

Registered Horse Power

Owners

Chas. &amp; Co. Ltd.

Port belonging to

Liverpool

Nom. Horse Power as per Section 28

305

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &amp;c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

21'-35'-58"

Length of Stroke

48

Revs. per minute

70

Dia. of Screw shaft

as per rule 12.95

Material of screw shaft

S.S.

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Yes

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

Yes

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

Yes

If two

liners are fitted, is the shaft lapped or protected between the liners

Yes

Length of stern bush

54"

Dia. of Tunnel shaft

as per rule 11.41

Dia. of Crank shaft journals

as per rule 11.95

Dia. of Crank pin

12.25

Size of Crank webs

22x88

Dia. of thrust shaft under

collars

13

Dia. of screw

16'-0"

Pitch of screw

16'-6"

No. of blades

4

State whether moveable

Yes

Total surface

75 sq ft.

No. of Feed pumps

2

Diameter of ditto

3 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps

Ballast 8x10x9  
Sewage 8x6x3  
General 6x4x2

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

In Engine Room

4-3 1/2"

In Holds, &amp;c.

6-8 1/2" &amp; 1-3"

No. of bilge injections

1

sizes

7"

Connected to condenser, or to circulating pump

Pump

Is a separate donkey suction fitted in Engine room &amp; size

Yes-3 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

None

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

Both

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

Fire hold sections

How are they protected

Wood casing

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

Before turning screw

shaft tunnel watertight

Stated to be

Is it fitted with a watertight door

Yes

worked from

Top platform

Engine Room

BOILERS, &amp;c.—

(Letter for record

7)

Total Heating Surface of Boilers

5421 sq ft.

Is forced draft fitted

No

No. and Description of Boilers

3-Large Tube Cylind.

Working Pressure

180 lbs

Tested by hydraulic pressure to

260 lbs

Date of test

5-9-05

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

53 1/2 sq ft.

and Description of safety valves to

each boiler

Two - Spring

each valve

7.07 sq in

Pressure to which they are adjusted

180 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers

14'-0"

Length

10'-7"

Material of shell plates

Steel

Thickness

1/2"

Range of tensile strength

28-32

Are they welded or flanged

No

Descrip. of riveting: cir. seams

Lap Br. S.

long. seams

Butt

Trade

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

9 1/2"

Lap of plates or width of butt straps

19 1/2"

Per centages of strength of longitudinal joint

rivets 89.1

plate 85.4

Working pressure of shell by rules

215 lbs

Size of manhole in shell

76 x 12"

Size of compensating ring

N. Nails

No. and Description of Furnaces in each boiler

3-Mannish

Material

Steel

Outside diameter

43 1/2"

Length of plain part

top 0"

bottom 0"

Thickness of plates

crown 3/8"

bottom 3/8"

Description of longitudinal joint

Weld

No. of strengthening rings

0

Working pressure of furnace by the rules

213 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

3/8"

Back

5/8"

Top

1/2"

Bottom

3/8"

Pitch of stays to ditto: Sides

8 1/2 x 7 1/2"

Back

8 1/2 x 7 1/2"

Top

8 x 7 1/2"

If stays are fitted with nuts or riveted heads

None inside

Working pressure by rules

184 lbs

Material of stays

Iron

Diameter at smallest part

1 1/2"

Area supported by

stay

63 1/2"

Working pressure by rules

214 lbs

End plates in steam space:

Material

Steel

Thickness

1/8"

Pitch of stays

6 1/2 x 12 1/2"

How are stays secured

N. Wash

Working pressure by rules

213 lbs

Material of stays

Steel

Diameter at smallest part

2 1/2"

Area supported by

stay

25 1/4 sq ft.

Working pressure by rules

211 lbs

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

3/8"

Greatest pitch of stays

14 1/2"

Working pressure of plate by rules

184 lbs

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2 x 4 1/2"

Material of tube plates

Steel

Thickness: Front

1"

Back

3/8"

Mean pitch of stays

9 1/2 x 9"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

188 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

7 1/2 x (3 x 2)

Length as per rule

265"

Distance apart

8"

Number and pitch of Stays in each

Working pressure by rules

215 lbs

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

Yes

No

## DONKEY BOILER—

No. *110* 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 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  
Plates

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:

Propeller & shaft: propeller loss: 4 propeller  
blades: Eccentric & frame & trap: 2 top end & 2 bottom end  
watches: one  
slide valve & spindle: set for two revs H. P. & 1. P.: 50 Condenser tubes &  
furnaces: air pump head valve: 2 Safety valve & pump & jet: amp all  
Plan to Lloyd's Rules Extra.

The foregoing is a correct description,

FOR WORKMAN, CLARK &amp; CO. LIMITED.

Manufacturer.

Dates

During progress of

work in shops—

of Survey

During erection on

while

board vessel —

building

Total No. of visits

Mar. 21, 24, 28 April 1, 5, 12, 18, 20, 24 May 1, 3, 8, 11, 15, 24, 29 June 1, 7, 19, 22, 26, 28 July 5 Aug. 1, 4, 9, 9  
11, 15, 16, 16, 17, 18, 18, 23, 25, 29, 29 Sep. 1, 5, 5, 7, 7, 11, 12, 14, 20, 22, 26 Oct. 3, 6, 10  
52

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

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

The machinery of this vessel has been constructed under  
Special Survey, and in accordance with the Rules.  
It has worked satisfactorily under steam, on trial, in  
Plymouth Sound, and the materials, and the workmanship, are  
of good description throughout.  
In my opinion, it is eligible for record + L.M.C. 10-05  
and Electric Light.

It is submitted that  
this vessel is eligible for  
THE RECORD

+ L.M.C. 10-05 ELEC. LIGHT.

RMS

RS

14.10.05

The amount of Entry Fee..

£ 3 : -

When applied for,

Special

£ 35 : -

11-10-05

Donkey Boiler Fee ..

£

When received,

Travelling Expenses (if any) £

:

23-10-05

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

Committee's Minute

TUES. 17 OCT 1905

Assigned

+ L.M.C. 1003

Elec. Light



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Foundation