

Port of

Belfast

Received at London Office

19

FRI 19 MAY 1906

No. in Survey held at
Reg. Book.Belfast
B.S. Pacuare

Date, first Survey Oct. 14th 1904 Last Survey May 16th 1905

(Number of Visits 52)

on the

Master

Built at

Belfast

By whom built

Workman Clark & Co. Ltd.

Tons

Gross 2891

Net 2483

When built 1905

Engines made at

Belfast

By whom made

Workman Clark & Co. Ltd.

when made 1905

Boilers made at

B

By whom made

B

when made

Registered Horse Power

Owners

Elders & Fyffes (Shipping) Ltd. Port belonging to Belfast

Nom. Horse Power as per Section 28

574

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

27"-44"-75"

Length of Stroke

48"

Revs. per minute

80

Dia. of Screw shaft

as per rule 14.58

Material of

Ingot

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

62"

Dia. of Tunnel shaft

as per rule 13.59

as fitted 14.0

Dia. of Crank shaft journals

as per rule 14.26

as fitted 14.5

Dia. of Crank pin

14.5

Size of Crank webs

26 1/2 x 9 1/2

Dia. of thrust shaft under

collars

14 1/2

Dia. of screw

16-9

Pitch of screw

18-6

No. of blades

4

State whether moveable

Yes

Total surface

82 sq ft.

No. of Feed pumps

2

Diameter of ditto

4 1/2

Stroke

27"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4 1/2

Stroke

27"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

1

Size of Engine

10 H.P.

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

In Engine Room

4-3 1/2

In Holds, &c.

4-3 1/2

+ 1-2 1/2

No. of bilge injections

1

sizes

9-1

Connected to condenser, or to circulating pump

Pumps

Is a separate donkey suction fitted in Engine room & 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

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

Fore Hold suction

How are they protected

Wood casings

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 launching

Is the screw shaft tunnel watertight

Stateable

Is it fitted with a watertight door

Yes

worked from

Top platform E-Room

BOILERS, &c.—

(Letter for record

S)

Total Heating Surface of Boilers

10800 sq ft.

Is forced draft fitted

No

No. and Description of Boilers

4-Single End Cylindrical

Working Pressure

190 lbs

Tested by hydraulic pressure to

380 lbs

Date of test

28-3-15

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

78 1/2 sq ft.

and Description of safety valves to

each boiler

Two-Direct Spring

Area of each valve

9.62 sq ft.

Pressure to which they are adjusted

195 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

14"

Mean dia. of boilers

16-6

Length

11-0

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

28-32

Are they welded or flanged

No

Descrip. of riveting: cir. seams

Lap Rivet

long. seams

Butt Rivet

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

10"

Lap of plates or width of butt straps

22 1/2"

Per centages of strength of longitudinal joint

rivets 94.7

plate 83.7

Working pressure of shell by rules

220 lbs

Size of manhole in shell

16 x 12"

Size of compensating ring

M. Keils

No. and Description of Furnaces in each boiler

4-Rectangular

Material

Steel

Outside diameter

45 1/2"

Length of plain part

top 6"

bottom 10"

Thickness of plates

crown 3 3/8"

bottom 3 1/4"

Description of longitudinal joint

Welded

No. of strengthening rings

Yes

Working pressure of furnace by the rules

215 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

1 1/2"

Back

1 1/2"

Top

1 1/2"

Bottom

1"

Pitch of stays to ditto: Sides

8 1/2 x 7 1/2"

Back

8 1/2 x 7 1/2"

Top

9 x 6 1/2"

If stays are fitted with nuts or riveted heads

Nuts inside

Working pressure by rules

190 lbs

Material of stay

Steel

Diameter at smallest part

1 1/8"

Area supported by each stay

6 1/8 sq ft.

Working pressure by rules

190 lbs

End plates in steam space:

Material

Steel

Thickness

1 1/2"

Pitch of stays

18 1/2 x 14"

How are stays secured

Nuts & Washers

Working pressure by rules

267 lbs

Material of stays

Steel

Diameter at smallest part

2 1/8"

Area supported by each stay

28 1/8 sq ft.

Working pressure by rules

251 lbs

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

3/8"

Greatest pitch of stays

13 1/2"

Working pressure of plate by rules

219 lbs

Diameter of tubes

1 1/4"

Pitch of tubes

4 1/2 x 4 1/2"

Material of tube plates

Steel

Thickness: Front

1"

Back

3/4"

Mean pitch of stays

9 x 8 3/4"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

190 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9 1/2 x 4 x 2"

Length as per rule

29 1/2"

Distance apart

9 x 8"

Working pressure by rules

238 lbs

Superheater or Steam chest; how connected to boiler

Yes

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

Working pressure by rules

End plates: Thickness

DONKEY BOILER— No. 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 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,

FOR WORKMAN, CLARK & CO., LIMITED

M. H. Bell.

Dates During progress of work in shops - 1904: Oct. 17-21-31 Nov. 2, 4, 7, 10, 14, 15, 24, 29 Dec. 2, 7, 10, 14, 16, 20, 23 Jan. 3, 5, 9, 12, 18, 24, 27, 31 Feb. 1, 4, 11, 14, 17, 21, 23, 24, 28 Mar. 1, 6, 16, 21, 24, 27, 28-29 April, 1-3, 5-6-10, 13-25 May 10, 16.

of Survey while board vessel -

building Total No. of visits 52

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

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

The machinery of this vessel has been carefully tested under special scrutiny, and in accordance with the Rules. The workmanship, and the materials used in its construction, are of good description throughout, and an trial under steam, in Belfast Lough, it worked satisfactorily.

In my opinion, it is eligible for record + L.M.C. 5-05 and "Electric Light" Repairs on the Electric Light installation, will be sent later.

It is submitted that this vessel is eligible for

THE RECORD L.M.C. 5.05. ELEC. LIGHT. REPAIRS.

22.5.05

The amount of Entry Fee... £ 3 - 0 : When applied for, 11-5-1905

Special... £ 48 - 17 : When received, 17-5-1905

Donkey Boiler Fee... £ :

Travelling Expenses (if any) £ :

Committee's Minute

TUES. 23 MAY 1905

Assigned

+ L.M.C. 5.05

MACHINERY CERTIFICATE
WRITTEN.

Rpt. 9a.

Port of Belfast

Continuation of Report No. 5906 dated 18th. May on the

Donkey Pumps
Ballast 4' x 9' x 9' Duplex
2 Main Feed 8' x 10 1/2' x 24
Auxiliary Feed 6' x 4 1/2' x 6
Fresh Water 4' x 4' x 6
General 4' x 5' x 8
Refrigerating 7' x 8 1/2' x 8

Spare Gear
Propeller Shaft
2 Propeller Blades
Set - Studs & nuts
1 Pair Crank Pin bushes
Crosshead

1 Air pump rod; 2 guards & studs; set valves
2 Slide valve & springs
2 Eccentric strap bolts
Sets H.P. & M.P. piston rings
2 cylinder escape valves; 2 springs
8 Boiler jacket check valves
1 Feed escape valve; 2 springs
2 Safety valve & springs
Fan & spindle for Centrifugal Pump
Spare gear

Breakdown shaft pumping
50 Condenser tubes
24 Boilers
12 Link ring bolts set - set
and all gear to our Rules additional.

R. J. Beveridge