

REPORT ON MACHINERY.

Port of

Belfast

Received at London Office

SAI. 14 MAY 1904

No. in Survey held at
Reg. Book.

Date first Survey 4 Dec 1902 Last Survey 14 May 1904

(Number of Visits 102)

on the

V.P.S. Kenilworth Castle

Tons { Gross 12975
Net 7185

Master

Joseph Norton

Built at

Belfast

By whom built

Laurand & Wolff Ltd

When built

1904

Engines made at

Belfast

By whom made

-

when made

-

Boilers made at

-

By whom made

-

when made

-

Registered Horse Power

✓

Owners

Union Castle Mail S.P. Coy Ltd

Port belonging to

London

Nom. Horse Power as per Section 28

2174

Is Refrigerating Machinery fitted

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engine

Twin Screw Triple Expansion Cylinders

No. of Cranks 8

Dia. of Cylinders

32"-46"-66"-96"

Length of Stroke

60"

Revs. per minute

80

Dia. of Screw shaft

as per rule 18.3N
as fitted 19.0

Lgth. of stern bush 78"

Dia. of Tunnel shaft

as per rule 17.12
as fitted 17.75

Dia. of Crank shaft journals

as per rule 17.97
as fitted 19.0

Dia. of Crank pin

20

Size of Crank web

35 3/4 x 3 3/4

of thrust shaft under collars 18 3/4

Dia. of screw

18"-9"

Pitch of screw

26"-6"

No. of blades

3

State whether moveable

Yes

Total surface 86 1/2 sq ft.

No. of Feed pumps

Vane

Diameter of diaphragm

Stroke

✓

Can one be overhauled while the other is at work

✓

No. of Bilge pumps

2

Diameter of ditto

6"

Stroke

30"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

See other sheets

Sizes of Pumps

✓

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

In Engine Room

4-4" in Stokeholds

6-4" 2-2 1/2"

In Holds, &c.

9-8 1/2" 6-2 1/2"

No. of bilge injections

2 sizes 18"

Connected to condenser

to circulating pump

Pumps

separate donkey suction fitted in Engine room & size

Yes 8"

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

Below

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

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

screw shaft tunnel watertight

Stated &c.

Is it fitted with a watertight door

Yes

worked from

Upper deck.

BOILERS, &c.—

(Letter for record)

Total Heating Surface of Boilers

38982 sq ft

Is forced draft fitted

No

No. and Description of Boilers

4 Single End Cylindrical

Working Pressure

220 lbs

Tested by hydraulic pressure to

440 lbs

Date of test

31/3/03

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

3.6

No. and Description of safety valves to

each boiler

2 Direct Spring

Area of each valve

Smallest distance between boilers

on plates and bunkers

on woodwork

15"

Mean dia. of boilers

14'-2"

Length

28'-9"

Material of shell plates

Steel

Thickness

Range of tensile strength

31-34

Are they welded or flanged

No

Descrip. of riveting: cir. seams

Lap, R. & Zuck

seams

Butt, Zuck

Diameter of rivet holes in long. seams

7/16"

Percentage of strength of longitudinal joint

rivets

Pitch of rivets

10"

Working pressure of shell by rules

253 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

No. Keils

No. and Description of Furnaces in each boiler

4

Materials

Steel

Outside diameter

45 1/2"

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

Weld

No. of strengthening rings

4

Working pressure of furnace by the rule

249 lbs

Pitch of stays to ditto: Sides

7 1/2 x 7 1/2

Back

8 1/2 x 7 1/2

Top

7 1/2 x 7 1/2

If stays are fitted with nuts or riveted heads

None inside

Working pressure by rules

238 lbs

Material of stays

Steel

Diameter at smallest part

1 1/2 x 1 1/8

Area supported by

stay

Working pressure by rules

225 lbs

End plates in steam space:

Material

Material

Steel

Thickness

Pitch of stays

How are stays secured

by nuts and washers

Working pressure by rules

263 lbs

Material of stays

Steel

Diameter at smallest part

2 1/2 x 2 1/8

Area supported by

stay

Working pressure by rules

247 lbs

Material of Front plates at bottom

Steel

Thickness

1 1/2"

Material of Lower back plate

Steel

Thickness

Pitch of stays

Greatest pitch of stays

12 1/2"

Working pressure of plate by rules

156 lbs

Depth and

diameter of tubes

Pitch across wide water spaces

4"

Working pressures by rules

288 lbs

Distance apart

9"

Number and pitch of Stays in each

3-7 1/2"

Thickness of girder at centre

9 x 7 1/2"

Working pressure by rules

223 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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

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

Lloyd's Register

Foundation

W682-0122 (1/2)

Port of Belcast Continuation of Report No. 5-738 dated 18th May 1901 on the

pt. 9a.

ort of Pelzact Continuation of Report No. 5738 dated

A. C. Kilworth Esq.

[illegible]

Donkey Pump

2 New's Double Feed Pumps $12 \times 8\frac{1}{2} \times 26$
 1 Holland & Wolffs Feed - Duplex $10\frac{1}{2} \times 4 \times 12$
 1 Clarke Chapman's Harbour - Single $9 \times 7 \times 21$
 1 Westminster Ballast - $12 \times 12 \times 14$
 3 Corriethers Duplex General Pumps $10 \times 6\frac{1}{2} \times 10$
 1 - - Fresh Water $4 \times 3 \times 5$

R. L. Burdick

DONKEY BOILER—		No.	Description		True	
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	
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:—			See Separate Sheet			

The foregoing is a correct description,
 J. B. Wood & Co. Manufacturer.

Dates of Survey while building	During progress of work in shops -	During erection on board vessel -	Total No. of visits	Is the approved plan of main boiler forwarded herewith
	4912 Dec 4, 8, 10, 15, 1903, Jan 2, 9, 30, Feb 14, 18, 25, March 2, 9, 12, 16, 24, 27	April 6, 10, 20, 29 May 11, 13, 20, 25, 29 and up to 14 th May 1904.	102	

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

Material of screw shaft *Hyd. Press. Ingot Steel* 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
non-corrosive *Yes* If two liners are fitted, is the shaft lapped or protected between the liners *Yes*

The machinery of this vessel has been constructed under Special License, and in accordance with the Rules. The engine is of the best type, and the materials are of the best description throughout, and on trial under steam, the machinery worked satisfactorily. In my opinion it is eligible for record.

+ L.M.C. 5-04.

A Report on the Electric Light installation, will be forwarded later.

It is submitted that
this vessel is eligible for
THE RECORD. F.L.M.C 5-04 ELEC. LIGHT.

ms
14.5.04

14.5.04

The amount of Entry Fee..	£ 3 : 0 :	When applied for,
Special	£ 128 14 :	12-5-1954
Donkey Boiler Fee	£ ✓ :	When received,
Travelling Expenses (if any) £	✓ :	20/5/54

Committee's Minute

FRI. 20 MAY 1904

Assigned

*Lm 6.5.04

INVENTORY CERTIFICATE
WRITTEN

R. L. Buerdick
Engineer Surveyor to Lloyd's Register of British & Foreign Ships