

REPORT ON MACHINERY.

Port of Belfast

Received at London Office MUN. FEB 24 1902

No. in Survey held at Belfast Date, first Survey Last Survey 19  
Reg. Book. S.S.S. Walmer Castle (Number of Visits)  
on the Built at Belfast By whom built Harland & Wolff L<sup>ts</sup> Tons Gross 1257 1/2 Net 646 3/4  
When built 1902  
Engines made at Belfast By whom made Harland & Wolff L<sup>ts</sup> when made 1902  
Boilers made at By whom made when made  
Registered Horse Power Owners Anian Castle Mail S.S. Co. L<sup>ts</sup> Port belonging to London  
Horse Power as per Section 28 2040 Is Refrigerating Machinery fitted No Is Electric Light fitted Yes

GINES, &c.—Description of Engines  
No. of Cylinders No. of Cranks  
Dia. of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule as fitted Lgth. of stern bush  
Dia. of Tunnel shaft as per rule as fitted Dia. of Crank shaft journals as per rule as fitted Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under  
Diam. of screw Pitch of screw No. of blades State whether moveable Total surface  
No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work  
No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work  
No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps  
Engine Room In Holds, &c.  
No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size  
Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible  
Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks  
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line  
Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate  
How are they protected  
Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times  
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges  
When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight  
Is it fitted with a watertight door worked from

BOILERS, &c.— (Letter for record) Total Heating Surface of Boilers Is forced draft fitted No  
No. and Description of Boilers Two Double Cylinders (13'-8" diam.) Working Pressure 216 lbs Tested by hydraulic pressure to 432 lbs  
Date of test 9-7-01 Can each boiler be worked separately Yes Area of fire grate in each boiler 108 sq ft No. and Description of safety valves to each boiler Two—Direct Spring Pressure to which they are adjusted 216 lbs Are they fitted with easing gear Yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 0' 6" 3'-4" Mean dia. of boilers 13'-8" Length 19'-6" 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 Rivet Seams Butt Seams  
Diameter of rivet holes in long. seams 1/2" Pitch of rivets 10" Lap of plates or width of butt straps 22 1/2"  
Percentage of strength of longitudinal joint rivets 87.7 Working pressure of shell by rules 248 lbs Size of manhole in shell 16" x 12"  
Size of compensating ring No. and Description of Furnaces in each boiler 6—Morrison Material Steel Outside diameter 43 1/2"  
Length of plain part top 4" bottom 7" Thickness of plates crown 3/8" bottom 5/8" Description of longitudinal joint Weld No. of strengthening rings 37  
Working pressure of furnace by the rules 281 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/8"  
Pitch of stays to ditto: Sides 8 x 7 3/4" Back 8 x 7 3/4" If stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 217 lbs  
Material of stays Steel Diameter at smallest part 1 3/4" Area supported by each stay 62.39 Working pressure by rules 190 lbs End plates in steam space: Material Steel Thickness 1" Pitch of stays 6 x 15 1/2" How are stays secured Nuts & Washers Working pressure by rules 227 lbs Material of stays Steel  
Diameter at smallest part 2 1/4" Area supported by each stay 248 sq Working pressure by rules 242 lbs Material of Front plates at bottom Steel  
Thickness 5/16" Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules  
Diameter of tubes 2 1/4" Pitch of tubes 4" x 4" Material of tube plates Steel Thickness: Front 1 1/4" Back 5/8" Mean pitch of stays 8" x 8"  
Pitch across wide water spaces 10 1/2" Working pressures by rules 384 lbs with flange Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 1/2" x 8" x 2 Length as per rule 44 Distance apart 7 1/2 Number and pitch of Stays in each 4-8"  
Working pressure by rules 282 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked  
Shipping separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet  
Boles 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



## 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

enter the donkey boiler

Dia. of donkey boiler

Length

Material of shell plates

Thickness

Range of ten

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

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,

Manufacturer.

Dates

During progress of

work in shops - -

of Survey

During erection on

while

board vessel - -

building

Total No. of visits

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

## General Remarks

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

Material of screw shaft

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

Is the after end of the liner made water tight in the propeller boss

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

non-corrosive

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

## List of Donkey Pumps

Two Double Weir Feed Pumps

12" x 8 1/2" x 26"

Deck. Sanitary Feed.

9" x 6" x 10" Duplex

Feed &amp; Gen

10 1/2" x 4" x 12"

Feed

6" x 4" x 6"

Pulper Ballast

12" x 10" x 14" Westinghouse

General

8" x 9 1/2" x 10" Duplex

F. Water

5 1/4" x 4" x 5"

Six Condensers 6" Centrifugal.

The amount of Entry Fee. . . £

Special . . . . . £

Donkey Boiler Fee . . . . £

Travelling Expenses (if any) £

When applied for,

When received,

Committee's Minute

TUES. FEB 25 1902

Assigned

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

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Lloyd's Register  
Foundation