

REPORT ON MACHINERY.

Port of *Belfast* Received at London Office *MUN. FEB 24 1902*

No. in Survey held at *Belfast* Date, first Survey *1902* Last Survey *19*

Reg. Book. *S.P.S. Walmer Castle* (Number of Visits *1*)

on the *Belfast* Tons { Gross *12545* Net *6463*

Master *Belfast* Built at *Belfast* By whom built *Harland & Wolff L.* When built *1902*

Engines made at *Belfast* By whom made *Harland & Wolff L.* when made *1902*

Boilers made at *Belfast* By whom made *Harland & Wolff L.* when made *1902*

Registered Horse Power *2040* Owners *Union Castle Mail S.S. Coy L.* Port belonging to *London*

Nom. Horse Power as per Section 28 *2040* Is Refrigerating Machinery fitted *No* Is Electric Light fitted *Yes*

ENGINES, &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 collars

Dia. of screw Pitch of screw No. of blades State whether moceable 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

In 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

What pipes are carried through the bunkers 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 *S*)Total Heating Surface of Boilers *✓*Is forced draft fitted *No*

No. and Description of Boilers *Two Single End* Working Pressure *216 lbs* Tested by hydraulic pressure to *432 lbs*

Date of test *9-4-01* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *56 sq ft* No. and Description of safety valves to each boiler *Two Direct Spring* each valve *9.8424* Pressure to which they are adjusted *216 lbs* Are they fitted with easing gear *Yes*

Smallest distance between boilers or uptakes and bunkers *18"* Mean dia. of boilers *14'-2"* Length *11'-0"* Material of shell plates *Steel*

Thickness *1 1/8"* Range of tensile strength *28-32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *Lap & Double* seams *Butt & Double*

Diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *10"* Lap of plates or width of butt straps *22 3/8"*

Per centages of strength of longitudinal joint rivets *84.4* plate *84.3* Working pressure of shell by rules *247 lbs* Size of manhole in shell *16" x 12"*

Size of compensating ring *McNeill* No. and Description of Furnaces in each boiler *3-Mannison* Material *Steel* Outside diameter *44 1/2"*

Length of plain part top *4"* Thickness of plates crown *3 3/8"* bottom *3 3/8"* Description of longitudinal joint *Weld* No. of strengthening rings *27 an*

Working pressure of furnace by the rule *238 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *5"* Back *5"* Top *5"* Bottom *5"*

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 *Nuts inside* Working pressure by rules *217 lbs*

Material of stays *Steel* Diameter at smallest part *1 1/2"* Area supported by each stay *61 1/2"* Working pressure by rules *191 lbs* End plates in steam space: Material *Steel* Thickness *1"* Pitch of stays *6 1/2" x 15 1/2"* How are stays secured *Nuts & Washers* Working pressure by rules *224 lbs* Material of stays *Steel*

Diameter at smallest part *2 1/2"* Area supported by each stay *248 sq"* Working pressure by rules *242 lbs* Material of Front plates at bottom *Steel*

Thickness *1 1/2"* Material of Lower back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *12 1/2"* Working pressure of plate by rules *271 lbs*

Diameter of tubes *2 1/2"* Pitch of tubes *4" x 4"* Material of tube plates *Steel* Thickness: Front *1 1/2"* Back *1 1/2"* Mean pitch of stays *8" x 8"*

Pitch across wide water spaces *14"* Working pressures by rules *370 lbs with 3/4" doubler* Orders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *8 1/2" (7-2)* Length as per rule *29"* Distance apart *7 1/2"* Number and pitch of Stays in each *3-7 1/2"*

Working pressure by rules *216 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

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,

Harland & Wolff Ltd 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

“ “ “ donkey “ “ “

General Remarks (State quality of workmanship, opinions as to class, &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 and non-corrosive

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

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee.	£	:	:	When applied for,
Special -	£	:	:	19...
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	19...

Committee's Minute

TUES. FEB 25 1902

Assigned

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



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Lloyd's Register Foundation

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