

REPORT ON MACHINERY.

No. 6998

FRI. OCT. 13. 1911

Port of Belfast Received at London Office

No. in Survey held at Belfast Date, first Survey 24 Aug. 1910 Last Survey 9 Oct. 1911

g. Book. S.S. Galway Castle (Number of Visits 11)

ster J. H. McFarland Built at Belfast By whom built Farland & Welford Tons { Gross 7988
Net 4985

ines made at Belfast By whom made - when made -

lers made at - By whom made - when made -

istered Horse Power 722 Owner Union Castle Mail S.S. Co. Ltd. Port belonging to London

n. Horse Power as per Section 28 722 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

GINES, &c.—Description of Engines Twin Screw Quadruple Expansion of Cylinders 8 No. of Cranks 8

of Cylinders 19 1/2 - 28 - 41 - 60 Length of Stroke 48 Revs. per minute 78 Dia. of Screw shaft 12 1/2 as per rule 12 1/2 Material of S. Steel
as fitted 13 1/2 screw shaft

he 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

he propeller boss Yes If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the part

een the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two

s are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 4'-8"

of Tunnel shaft 11 1/2 as per rule 12 1/4 Dia. of Crank shaft journals 12 1/2 as per rule 12 1/2 Dia. of Crank pin 3 1/2 Size of Crank 24 1/2 x 8 1/2 Dia. of thrust shaft under

rs 12 1/2 Dia. of screw 15'-6" Pitch of Screw 20'-3" No. of Blades 3 State whether moveable Yes Total surface 62 sq. ft.

of Feed pumps Two on Main Engines Can one be overhauled while the other is at work

of Bilge pumps 1 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes - One on each engine

of Donkey Engines See other sheet No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 6-3 1/2" 2-3" In Holds, &c. 10-3 1/2" 2-3"

Bilge Injections 2 sizes 9" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & Yes - 7"

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 ✓

all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

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

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

pipes are carried through the bunkers Fore hold suction How are they protected Iron casing

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

he Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

of examination of completion of fitting of Sea Connections 16-3-11 of Stern Tube 22-3-11 Screw shaft and Propeller 3-4-11

Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform to Room

ERS, &c.—(Letter for record S) Manufacturers of Steel W. D. Colvells & Sons Ltd.

Heating Surface of Boilers 9916 sq. ft. Forced Draft fitted No No. and Description of Boilers 2 Double End Cyl.

ing Pressure 220 lbs Tested by hydraulic pressure to 440 lbs Date of test 13-4-11 No. of Certificate 243

ach boiler be worked separately Yes Area of fire grate in each boiler 129 1/2 sq. ft. No. and Description of Safety Valves to

oiler Two, Direct Spring of each valve 8 1/2" Pressure to which they are adjusted 225 lbs Are they fitted with easing gear Yes

st distance between boilers or uptakes and bunkers or woodwork 16" Mean dia. of boilers 15'-8" Length 9'-9" Material of shell plates Steel

ess 3 1/2 Range of tensile strength 30-34 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap. Riv.

am Butt Seams Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 10 1/2 Lap of plates or width of butt straps 28 1/2

stages of strength of longitudinal joint 92.0 Working pressure of shell by rules 250 lbs Size of manhole in shell 16" x 12"

compensating ring No No. and Description of Furnaces in each boiler 6 - L-shaped Material Steel Outside diameter 50 1/2"

h of plain part 10" Thickness of plates 3 1/2 Description of longitudinal joint Weld No. of strengthening rings ✓

ng pressure of furnace by the rules 246 lbs Combustion chamber plates: Material Steel Thickness: Sides 3 1/2 Back ✓ Top 3 1/2 Bottom 8"

f stays to ditto: Sides 8" x 8" Back ✓ Top 8" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 233 lbs

al of stay Steel Diameter at smallest part 1 1/2 - 1 5/8 Area supported by each stay 64 sq. in. Working pressure by rules 220 lbs and plates in steam space:

al Steel Thickness 1 1/2 Pitch of stays 16" x 6" How are stays secured Single Nuts Working pressure by rules 234 lbs Material of stays Steel

er at smallest part 2 3/4 Area supported by each stay 256 sq. in. Working pressure by rules 241 lbs Material of Front plates at bottom Steel

ss 1/16 Material of Lower back plate ✓ Thickness ✓ Greatest pitch of stays ✓ Working pressure of plate by rules ✓

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

across wide water spaces 13 1/2 Working pressures by rules 268 lbs with 7 Double Girders to Chamber tops: Material Steel Depth and

s of girder at centre 18" x (4" x 2") Length as per rule 57" Distance apart 8" Number and pitch of stays in each 6-8"

g pressure by rules 261 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

y 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

ed with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

orking pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description				
Made at	By whom made	When made	Where fixed		
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
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
Working pressure of shell by rules	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	
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— See other sheet ✓

The foregoing is a correct description,
for Harland & Wolff Ltd.,
Harland & Wolff Ltd. Manufacturer.

Dates of Survey while building
During progress of work in shops— 1910:— Aug 24, 26-30, Sep 1, 8, 14, 20, 28, 30, Oct 4, 6, 10, 12, 14, 21, 26, 27.
During erection on board vessel— Nov. 1, 3, 9, 11, 15, 18, 21, 24, 30 Dec 2, 5, 8, 12 up to 9th Dec 1911
Total No. of visits 115

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 9-11 Slide Covers to Pistons Rods
Connecting rods 10-4-11 Crank shaft 23-12-11 Tunnel shafts Screw shafts 15-5-11 Propeller 3-3-11
Stern tube 3-3-11 Steam pipes tested 21-4-11 Engine and boiler seatings 23-5-11 Engines holding down bolts 23-5-11
Completion of pumping arrangements 2-9-11 Boilers fixed 26-5-11 Engines tried under steam 15-8-11
Main boiler safety valves adjusted 15-8-11 Thickness of adjusting washers 11-14-11
Material of Crank shaft I. Steel Identification Mark on Do. 440 YDS 7.5.11 Material of Thrust shaft Ido Identification Mark on Do. Ido
Material of Tunnel shafts Ido Identification Marks on Do. Ido Material of Screw shafts Ido Identification Marks on Do. Ido
Material of Steam Pipes Steel Test pressure 650 lbs.

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

The machinery of this vessel has been constructed under Special Survey, and in accordance with the Rules. The materials and the workmanship are of good description throughout, and on trials under steam in Belfast Lough the machinery worked satisfactorily. In my opinion, it is eligible for record of + L.M.C. 10-11, and notation "Electric Light" and "Refrigerating Machinery".

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 10. 11.

The amount of Entry Fee... £ 3 : 0 :
Special ... £ 56 : 2 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 10-10-1911
When received, 18-10-1911

Committee's Minute TUE. OCT. 17. 1911
Assigned + L.M.C. 10. 11

R. F. Pennington
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



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Foundation

ORIGINAL CERTIFICATE
WHITTEN

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

This office