

REPORT ON MACHINERY.

No. 6998

FRI. JCT. 13. 1911

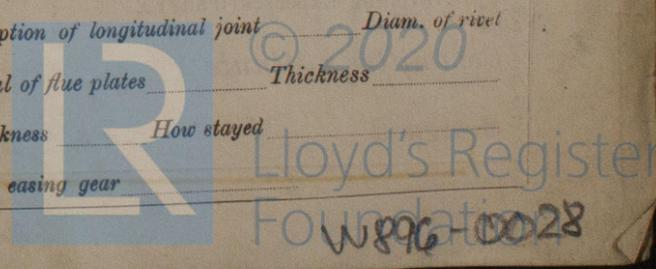
Port of Belfast Received at London Office
 No. in Survey held at Belfast Date, first Survey 24 Aug 1910 Last Survey 9 Oct 1911
 g. Book. S.S. Galway Castle (Number of Visits 11)
 72 on the S.S. Galway Castle Tons { Gross 7988
 ster J. H. McFarland Built at Belfast By whom built Farland & Welford When built 1911
 nes made at Belfast By whom made - when made -
 lers made at - By whom made - when made -
 ristered Horse Power - Owner Union-Castle Mail S.S. Coy Ltd Port belonging to Londan
 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 Expansive 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 as per rule 12.86 Material of J. Steel
 as fitted 13.3 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 as per rule 11.54 Dia. of Crank shaft journals as per rule 12.14 Dia. of Crank pin 3 1/4 Size of Crank pins 2 1/8 x 8 1/2 Dia. of thrust shaft under
 as fitted 12.12 as fitted 12.75
 rs 12.75 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 Diameters as per rule Stroke Main Engine 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 & size Yes - 4"
 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 3-2-11
 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 A. Colwell & Sons Ltd
 Heating Surface of Boilers 9916 sq ft Forced Draft fitted No No. and Description of Boilers 2 Double End Cyl.
 Working 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
 boiler Two, Direct Spring of each valve 2 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 19'-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 Rivet
 Butt Seams Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 10 1/2" Lap of plates or width of butt straps 28 1/2"
 stages of strength of longitudinal joint rivets 92.0 Working pressure of shell by rules 250 lbs Size of manhole in shell 16" x 12"
 compensating ring McNeill No. and Description of Furnaces in each boiler 6 - Suspension Material Steel Outside diameter 50 1/8"

h of plain part top 2 Thickness of plates crown 3/4" Description of longitudinal joint mech No. of strengthening rings ✓
 bottom 10 bottom 3/16"
 ng pressure of furnace by the rules 246 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/8" Back ✓ Top 3/2" Bottom 3/8"
 of 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 Nut 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 3/16" Material of Lower back plate ✓ Thickness ✓ Greatest pitch of stays ✓ Working pressure of plate by rules ✓
 r of tubes 2 3/4" Pitch of tubes 4" x 4" Material of tube plate Steel Thickness: Front 3/8" Back 3/8" Mean pitch of stays 8" x 8"
 across wide water spaces 13 1/2" Working pressures by rules 268 lbs with 3 Double Girders to Chamber tops: Material Steel Depth and
 s of girder at centre 10" x (4 x 2) Length as per rule 54" Distance apart 8" Number and pitch of stays in each 6-8"
 ng 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., Manufacturer.

1910: - Aug 24, 26-30, Sep 1, 8, 14, 20, 28, 30, Oct 4, 6, 10, 12, 17, 21, 26, 27.

During progress of work in shops -

During erection on board vessel - Nov. 1, 3, 9, 11, 15, 18, 21, 24, 30 Dec 2, 5, 8, 12 up to 9th Nov 1911

Total No. of visits 115

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 9-11 Still 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. LLOYDS A.J.B. Material of Thrust shaft WLO Identification Mark on Do. WLO

Material of Tunnel shafts WLO Identification Marks on Do. WLO Material of Screw shafts WLO Identification Marks on Do. WLO

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 trial 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.

J.W.D. 13/10/11

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

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

Committee's Minute TUE. OCT. 17. 1911 + Lmb. 10. 11

MACHINERY CERTIFICATE WHITTEN



Certificate (if required) to be sent to this office

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