

REPORT ON MACHINERY.

No. 7063

Date of writing Report 21 April 1912 When handed in at Local Office 10 Port of Belfast THU. ADD 11 1912
 No. in Survey held at Belfast Date, First Survey 25 Jan 1911 Last Survey 28 March 1912
 Reg. Book. J.S.S. "Atlantic" (Number of Visits 43)
 on the Master Built at Belfast By whom built Harland & Wolff L^{td} Tons { Gross 2254
 Net 937
 When built 1912

Engines made at By whom made when made
 Boilers made at By whom made when made

Registered Horse Power 5 Owners Belfast S.S. Coys L^{td} Port belonging to Belfast
 Nom. Horse Power as per Section 28 840 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Screw Lane cylinder Triple Expansion No. of Cranks 8

Dia. of Cylinders 21½" 35" 41" 41" Length of Stroke 36" Revs. per minute 160 Dia. of Screw shaft as fitted 3½" 11" 7½" Material of P. Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liners Is the after end of the liner made water tight in the propeller boss - a king screw fitted, while metal in stern tube 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 Length of stern bush 51"

Dia. of Tunnel shaft as fitted 11" Dia. of Crank shaft journals as fitted 11" 7½" Dia. of Crank pin 12" Size of Crank web 2½" x 8½" Dia. of thrust shaft under

collars 11 ¾" Dia. of screw 11" 3" Pitch of Screw 13" 0" No. of Blades 3 State whether moveable No Total surface 42 sq ft.

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

In Engine Room 2-3½" & 4-3" ✓ In Holds, &c. 4-3" ✓

No. of Bilge Injections 2 sizes 8" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size 2-3½"

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 ✓

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 None How are they protected ✓

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

Dates of examination of completion of fitting of Sea Connections 26-7-11 of Stern Tube 28-7-11 Screw shaft and Propeller 28-7-11

Is the Screw Shaft Tunnel watertight Stated to be it fitted with a watertight door Yes worked from Upper deck

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel W. & A. Cowell & Sons

Total Heating Surface of Boilers 11450 sq ft Forced Draft fitted Yes No. and Description of Boilers 2-Double End cylinder

Working Pressure 195 lbs Tested by hydraulic pressure to 390 lbs Date of test 27-10-11 No. of Certificate 4418

Can each boiler be worked separately Yes Area of fire grate in each boiler 154½ sq ft No. and Description of Safety Valves to

each boiler 4- Direct Spring Area of each valve 10' 32 sq Pressure to which they are adjusted 195 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork About 14" Mean dia. of boilers 16'-6" Length 19'-6" Material of shell plates Steel

Thickness 1 ¾" Range of tensile strength 29-33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap. D. & S.

long. seams Butt Bevel Diameter of rivet holes in long. seams 1 ¾" Pitch of rivets 10½" Lap of plates or width of butt straps 22 ¾"

Per centages of strength of longitudinal joint rivets 87.5 Working pressure of shell by rules 227 lbs Size of manhole in shell 16" x 12"

Size of compensating ring No. and Description of Furnaces in each boiler 8-Munnison's Material Steel Outside diameter 45 ½"

Length of plain part top 5' Thickness of plates crown 3 ½" Description of longitudinal joint Weld No. of strengthening rings 8 to an

Working pressure of furnace by the rules 208 lbs Combustion chamber plates: Material Steel Thickness: Sides 2 ½" Back 2 ½" Top 2 ½" Bottom 1 ½"

Pitch of stays to ditto: Sides 8 ½" x 8 ½" Back 8 ½" x 8 ½" Top 7 ½" x 7 ½" If stays are fitted with nuts or riveted heads Nuts & washers Working pressure by rules 206 lbs

Material of stay Steel Diameter at smallest part 1 ½" x 1 ½" Area supported by each stay 724 sq Working pressure by rules 219 lbs and plates in steam space:

Material Steel Thickness 1 ½" Pitch of stays Various How are stays secured Nuts & washers Working pressure by rules 219 lbs

Diameter at smallest part 3 ½" x 2 ¾" Area supported by each stay Various Working pressure by rules 219 lbs Front plates at bottom Steel

Thickness 7 8" Material of Lower back plate ✓ Thickness ✓ Greatest pitch of stays ✓ Working pressure of plate by rules ✓

Diameter of tubes 2 ½" Pitch of tubes 3 ¾" x 3 ¾" Material of tube plate Steel Thickness: Front 7 8" Back 7 8" Mean pitch of stays 7 ½" x 7 ½"

Pitch across wide water spaces 13 ¾" Working pressures by rules 196 lbs Girders to Chamber tops: Material Iron Depth and

thickness of girder at centre 9 x (6 x 2) Length as per rule 51" Distance apart 8 ½" x 7" Number and pitch of stays in each 6-7 ½"

Working pressure by rules 294 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

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 casing 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 _____ Radius of do. _____ 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,

S. A. Holland & Co. Ltd. Manufacturer.

Dates of Survey: During progress of work in shops— 1911 Jan 25, Feb 6, 8, 13, Mar 3, 9, April 12, 24, 28, May 3, 8, 16, June 15.
 while building— 1912 Jan 21, 26, July 18, 25, 26, 28, Oct 27, 1912, Jan 23, 29 up to 28 March 1912
 Total No. of visits 43

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders 6 Stides 5-11 Covers _____ Pistons _____ Rods _____
 Connecting rods 23-1-12 Crank shaft *Examination on Campbell's* Screw shafts _____ Propeller 21-6-11
 Stern tube 21-6-11 Steam pipes tested 2-7-11 Engine and boiler seatings 23-1-12 Engines holding down bolts 23-1-12
 Completion of pumping arrangements 28-3-12 Boilers fixed 2-2-12 Engines tried under steam 27-2-12
 Main boiler safety valves adjusted 27-2-12 Thickness of adjusting washers 8-12 32
 Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS* Material of Thrust shaft *Do* Identification Mark on Do. *Do*
 Material of Tunnel shafts *Do* Identification Marks on Do. *LLOYDS* Material of Screw shafts *Do* Identification Marks on Do. *LLOYDS*
 Material of Steam Pipes *Steel* Identification Marks on Do. *LLOYDS* Test pressure 585 lbs 28-9-11

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

The machinery of this vessel has been examined under Special Survey, and in accordance with the Rules. The workmanship, and the materials are of good description and on trial in Belfast Lough, the machinery worked satisfactorily.

In my opinion, it is eligible for record + L.M.C. 3-12. with notation "Forced Draft" & "Electric Light".

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3. 12.

F.D.

FRS
J.W.D.
 11/4/12

The amount of Entry Fee *included*
 Special *in Ship Fee as per Sec 2 Letter*
 Donkey Boiler Fee *7/9/11*
 Travelling Expenses (if any) _____

When applied for, 1-4-12
 When received, _____

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

Committee's Minute

FRI. APR. 12. 1912

Assigned

Home 3. 12

MACHINERY CERTIFICATE
 WRITTEN



© 2020

Lloyd's Register
 Foundation