

REPORT ON MACHINERY.

No. 33349
WED. NOV. 19, 1913

Received at London Office

Date of writing Report 17-11-1913 When handed in at Local Office 17-11-1913 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 7. 4. 1913 Last Survey 11-11-1913
Reg. Book. 28 on the Steel Screw 3 Mast Steamer "Patricia" (Number of Visits) Tons } Gross
Master Built at Dublin By whom built Dublin Dockyard Co Ltd When built 1913

Engines made at Glasgow By whom made Ross and Duncan (7.939) when made 1913
Boilers made at Glasgow By whom made Ross and Duncan (7.1423) when made 1913
Registered Horse Power Owners Michael Murphy Ltd Port belonging to Cardiff

Nom. Horse Power as per Section 28 180 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Compound No. of Cylinders 2 No. of Cranks 2
Dia. of Cylinders 21" + 46" Length of Stroke 30" Revs. per minute 102 Dia. of Screw shaft as per rule 9.45 Material of screw shaft Iron
Is the 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
In the 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
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 3'-5 1/2"

Dia. of Tunnel shaft as per rule 9.40 Dia. of Crank shaft journals as per rule 9.45 Dia. of Crank pin 10" Size of Crank webs 18 1/2" x 6 1/4" Dia. of thrust shaft under
collars 9 7/8" Dia. of screw 11-6" Pitch of Screw 13'-3" No. of Blades 4 State whether moveable Yes Total surface 46.5 sq ft
No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 15" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 15" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 3 Sizes of Pumps 8 x 9, 10 Duplex Ballast No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room One 2 1/4", one 2 3/4" and one 2 1/4" special In Holds, &c. two 2"

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump C.R. Is a separate Donkey Suction fitted in Engine room & size Yes 2 1/4"
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 None
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves and cocks
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 above
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 Forward pipes How are they protected wood casings
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 and of Stern Tube and Screw shaft and Propeller See Dublin
Is the Screw Shaft Tunnel watertight Yes Is a joint with a water tight door Is a joint with a water tight door

OILERS, &c.—(Letter for record S) Manufacturers of Steel D. Colville and Sons and The Lanarkshire
Total Heating Surface of Boilers 2370 sq ft Is Forced Draft fitted No No. and Description of Boilers 1 Single ended marine
Working Pressure 135 lbs Tested by hydraulic pressure to 240 lbs Date of test 28-8-13 No. of Certificate 12278

Can each boiler be worked separately Area of fire grate in each boiler 69 sq ft No. and Description of Safety Valves to
each boiler two spring loaded Area of each valve 8.95 sq ft Pressure to which they are adjusted 135 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 3'-6" dia. of boilers 15'-9" Length 11'-0" Material of shell plates Steel
Thickness 1" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.
long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 6 7/8" width of butt straps 1'-5 1/2"
Per centages of strength of longitudinal joint rivets 85.6 Working pressure of shell by rules 135.5 lbs Size of manhole in shell 12" x 16"
Size of compensating ring 6 3/4" x 1" No. and Description of Furnaces in each boiler 3 corrugated Material steel Outside diameter 4'-4 1/2"
Length of corrugation } 8" Thickness of plates crown } 1/2" Description of longitudinal joint welded No. of strengthening rings none
Working pressure of furnace by the rules 144 lbs combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 19/32"
Pitch of stays to ditto: Sides 8 x 9 1/4" Back 8 3/4 x 8 1/2" Top 8 x 9 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 142 lbs
Material of stays steel Diameter at smallest part 1 1/4" Area supported by each stay 76.16 sq in Working pressure by rules 154 lbs End plates in steam space:
Material steel Thickness 1" Pitch of stays 1-8 1/4 x 1-5 How are stays secured D.R. Working pressure by rules 135 lbs Material of stays steel
Diameter at smallest part 1 1/4" Area supported by each stay 34.4 x 25.09 sq in Working pressure by rules 156 lbs Material of Front plates at bottom steel
Thickness 2 3/32" Material of Lower back plate steel Thickness 2 3/32" Greatest pitch of stays 3 1/2" x 8 3/4" Working pressure of plate by rules 138 lbs
Diameter of tubes 3 1/2" Pitch of tubes 4 7/8" x 4 1/2" Material of tube plates steel Thickness: Front 2 3/32" Back 1 1/16" Mean pitch of stays 11 1/4"
Pitch across wide water spaces 14 Working pressures by rules 135 lbs Girders to Chamber tops: Material Iron Depth and
thickness of girder at centre 4 1/2" x 2" Length as per rule 2'-8 3/4" Distance apart 9 1/4" Number and pitch of stays in each 3 @ 8"
Working pressure by rules 134 Superheater or Steam chest; how connected to boiler None 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
oles Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
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

002385-002400-0047

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
 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:— 4 Propeller blades, 1 set of Piston rod bolts and nuts 1 set of connecting rod bolts, 1 set of main bearing bolts, 1 set of coupling bolts, 1 set of Air pump valves 1 set of circulating pump valves, 1 set of feed and 1 set of Bilge pump valves, 1 set of H.P. piston rings 1 set of Air feed check valves, 1 eccentric strap, a quantity of iron of various sizes and bolts & nuts a quantity of boiler plate & stay tubes and a few coachwork tubes and ferrules. (Arrows) The foregoing is a correct description,

Ross & Duncan
 Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1913. Jan. 7-11-13-23-28 Feb. 6-11-14-18-25 Mar. 14-28-31 Apr. 8-15-16-28 May 5-14-23-27.
 { During erection on board vessel --- June 2-5-9-11-17 July 9-15 Aug 5-12-20-28 Sept 30 Oct 2-15-20-21-27-28-30 Nov 5-11
 Total No. of visits 42

Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " Yes

Dates of Examination of principal parts—Cylinders 27-5-13 Slides 27-5-13 Covers 5-6-13 Pistons 29-5-13 Rods 27-5-13
 Connecting rods 27-5-13 Crank shaft 14-5-13 Thrust shaft 23-5-13 Tunnel shafts ✓ Screw shaft 23-5-13 Propeller 23-5-13
 Stern tube 23-5-13 Steam pipes tested 22-10-13 Engine and boiler seatings 13-10-13 Engines holding down bolts 13-10-13
 Completion of pumping arrangements 3-11-13 Boilers fixed 30-9-13 Engines tried under steam 11-11-13
 Main boiler safety valves adjusted 13-10-13 Thickness of adjusting washers Port 5/16. Starboard 5/16
 Material of Crank shaft Steel Identification Mark on Do. 5942 Material of Thrust shaft Steel Identification Mark on Do. 5942
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 5942
 Material of Steam Pipes Copper Test pressure 360 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. The materials and workmanship are good. The Machinery and Boiler has been built under special survey in accordance with the rules and approved plans, securely fitted aboard, and tried with satisfactory results under steam and are, in my opinion, suitable for classification with record T.L.M.C. 11-13.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11. 13.

JWD
 20/11/13

Thos. A. Ferguson.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £ 2 : 0 : 0 When applied for, 18-11-13
 Special .. £ 19 : 10 : 0
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ : : : When received, 20/11/13

Committee's Minute

GLASGOW 18 NOV. 1913

Assigned to L.M.C. 11.13 subject to classification of hull.

FRID. NOV. 21-11-13
 + L.M.C. 11.13
 Lloyd's Register
 MACHINERY CERTIFICATE
 WRITTEN

GLASGOW

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

18-11-13