

Rpt. 4.

REPORT ON MACHINERY.

No. 34190.

Date of writing Report 19 When handed in at Local Office 3. 7. 10/14 Port of Glasgow TUE. JUL. - 7. 1914
 No. in Survey held at Clydebank Date, First Survey 19. 12. 13 Last Survey 23. 6. 1914
 Reg. Book. on the s/s Linda Blanche (Number of Visits 17)
 Master Built at Bowling By whom built Scott & Sons Tons Gross 530. Net 199.
 Engines made at Clydebank By whom made Aitchison Blair & Co 87 when made 1914
 Boilers made at Glasgow By whom made D Rowan & Co 204 when made 1914
 Registered Horse Power Owners Anglesey Shipping Co Ltd Port belonging to Beaumaris
 Nom. Horse Power as per Section 28 103 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 14. 23-38 Length of Stroke 27 Revs. per minute 120 Dia. of Screw shaft as per rule 7.89 Material of screw shaft as fitted 7.15 steel
 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 yes If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 2'-10"
 Dia. of Tunnel shaft as per rule 7.11 Dia. of Crank shaft journals as per rule 7.46 Dia. of Crank pin 7.5 Size of Crank webs 5x10 1/4 Dia. of thrust shaft under collars 7.5 Dia. of screw 9'-6" Pitch of Screw 11'-6" No. of Blades 4 State whether moveable no Total surface 28.8 ft
 No. of Feed pumps 2 Diameter of ditto 2 1/4 Stroke 14" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/4 Stroke 14" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 duplex Sizes of Pumps 7 1/2 - 4 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps 3 1/4 - 2 x 4
 In Engine Room 1 of 2 In Hold, &c. 2 of 2 1/2

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump circ. pump Is a separate Donkey Suction fitted in Engine room & size yes 2"
 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 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 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 bilge How are they protected wood casing
 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 21-5-14 of Stern Tube 21-5-14 Screw shaft and Propeller 21-5-14
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record) Manufacturers of Steel Boiler by D Rowan & Co. see separate report (204)
 Total Heating Surface of Boilers 1905 ft Is Forced Draft fitted no No. and Description of Boilers One Single ended.
 Working Pressure 180 lb Test by hydraulic pressure to 360 lb Date of test 22/4/14 No. of Certificate 12669.
 Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler 2 direct spring Area of each valve 5.94 ft Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2'-0" Mean dia. of boilers Length Material of shell plates
 Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
 long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 bottom Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
 Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
 Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
 Working pressure by rules 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

W834-0032

VERTICAL DONKEY BOILER— Manufacturers of Steel by Anderson & Son. See separate report.
No. one Description Vertical Cross Tube.
Made at Carfin By whom made Anderson & Son When made 1914 Where fixed Stokehold
Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety Valves direct spring No. of Safety Valves 2 Area of each 2.4" Pressure to which they are adjusted 105 lbs Date of adjustment 14.6.14
If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no 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 Adjusting washers PV 13/32

SPARE GEAR. State the articles supplied:— 2 top end, 2 bottom end, 2 main bearing and set of coupling bolts and nuts. Set of feed & bilge pump valves. Assorted iron, bolts & nuts. HP piston valve. 1/2 eccentric strap. 3 feed check valves.

AITCHISON, BLAIR LTD.

The foregoing is a correct description,

Manufacturer.

Arch Blair. Director

Dates of Survey while building { During progress of work in shops -- } 1913 Dec 19. 1914 Jan 8. 15. 19. 21. Feb 5. Mar 4. 11. Apr 1. 28. May 11. 21. Jun 1. 8. 15. 17. 23. 17.
{ During erection on board vessel -- }
Total No. of visits 17.

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " no

Dates of Examination of principal parts—Cylinders 19.12.13 Slides 28.4.14 Covers 11.5.14 Pistons 19.1.14 Rods 19.12.13
Connecting rods 19.12.13 Crank shaft 21.1.14 Thrust shaft 11.5.14 Tunnel shafts — Screw shaft 11.5.14 Propeller 1.4.14
Stern tube 11.5.14 Steam pipes tested 16.6.14 Engine and boiler seatings 21.5.14 Engines holding down bolts 1.6.14
Completion of pumping arrangements 14.6.14 Boilers fixed 17.6.14 Engines tried under steam 23.6.14
Main boiler safety valves adjusted 14.6.14 Thickness of adjusting washers PV 3/8 base. SV 3/8
Material of Crank shaft Iron Identification Mark on Do. 8Y HC Material of Thrust shaft steel Identification Mark on Do. 8Y
Material of Tunnel shafts none Identification Marks on Do. — Material of Screw shafts steel Identification Marks on Do. 8Y
Material of Steam Pipes Copper Test pressure 360 lbs

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

The machinery of this vessel has been constructed under special survey in accordance with the rules, and has been seen working under steam satisfactory. Materials & workmanship are good.

This machinery is eligible in my opinion to be classed + LMC. 6.14.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC. 6.14.

JWR. APR. 7/7/14

The amount of Entry Fee .. £ 2 : 0 :
Special .. £ 9 : 2 :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : :
When applied for, 3/7/14.
When received, 6/7/14.

Harry Clarke.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute GLASGOW 6-JUL-1914

Assigned + LMC 6.14.



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