

REPORT ON MACHINERY.

No. 34012

Received at London Office

of writing Report 4. 4 1914 When handed in at Local Office 18. 5. 1914 Port of **GLASGOW** THU. MAY. 21. 1914
 in Survey held at **Paisley** Date, First Survey 23. 7. 13 Last Survey 14. 5. 1914
 Book. on the s/s **Aberdale** (Number of Visits 31
 Gross Tons 621
 Net Tons 265
 When built 1914
 Built at **Paisley** By whom built **J Fullerton**
 Engines made at **Paisley** By whom made **Fisher & Co (200)** when made 1914
 Boilers made at **ditto** By whom made **A F Craig & Co Ltd** when made 1914
 Registered Horse Power Owners **W Postlethwaite & Son** Port belonging to **Liverpool**
 Horse Power as per Section 28 105 Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **No**

GINES, &c.—Description of Engines **Triple Expansion** No. of Cylinders 3 No. of Cranks 3
 No. of Cylinders 14-24-40 Length of Stroke 27 Revs. per minute 120 Dia. of Screw shaft as per rule 8.15 Material of screw shaft as fitted 8.14 Material of screw shaft S
 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
 propeller boss **yes** If the liner is in more than one length are the joints burned **yes** If the liner does not fit tightly at the part
 the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive **yes** If two
 are fitted, is the shaft lapped or protected between the liners **yes** Length of stern bush 2-9
 Tunnel shaft as per rule 4.0 Dia. of Crank shaft journals as per rule 4.61 Dia. of Crank pin 4.61 Size of Crank webs 14.5 Dia. of thrust shaft under
 as fitted 4.0 Dia. of screw 10-0 Pitch of Screw 12-3 No. of Blades 4 State whether moveable **No** Total surface 41
 Feed pumps 2 Diameter of ditto 2.2 Stroke 13.2 Can one be overhauled while the other is at work **yes**
 Bilge pumps 2 Diameter of ditto 2.3/4 Stroke 13.2 Can one be overhauled while the other is at work **yes**
 Donkey Engines 2 Sizes of Pumps 6-4-6-6-8-8 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 2 21-2 In Holds, &c. 2 21-2 Fore Peak 1-4 After Peak 3
 Bilge Injections 4 sizes 3 Connected to condenser or to circulating pump **yes** Is a separate Donkey Suction fitted in Engine room & size **yes 2**
 Are 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 **yes**
 Are the 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**
 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**
 Date of examination of completion of fitting of Sea Connections 31-3-14 of Stern Tube 31-3-14 Screw shaft and Propeller 31-3-14
 Is Screw Shaft Tunnel watertight **No** Is it fitted with a watertight door **yes** worked from **yes**

WATERS, &c.—(Letter for record 5) Manufacturers of Steel
 Heating Surface of Boilers 1848 Is Forced Draft fitted **No** No. and Description of Boilers **One Single Ended**
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 15-1-14 No. of Certificate 12495
 Can each boiler be worked separately **yes** Area of fire grate in each boiler 53.6 No. and Description of Safety Valves to
 boiler **Double Spring** Area of each valve 5.939 Pressure to which they are adjusted 180 Are they fitted with easing gear **yes**
 Least distance between boilers or uptakes and bunkers or woodwork 36 Mean dia. of boilers Length Material of shell plates
 Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
 Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
 No. and Description of Furnaces in each boiler Material Outside diameter
 Thickness of plates top crown Description of longitudinal joint No. of strengthening rings
 bottom bottom Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 Working pressure 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



W240-0050

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description
 Made at By whom made When made Where fired
 Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of
 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
 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:—

2 Connecting Rod. 10th Nut for top End, 10th for bottom End. 2 Main Bearing 10th, 1 Set of Coupler
 1 Set of End Bridge Pump Valves, 1 Set of Piston Rings, a Quantity of Assorted bolts, Nuts & Iron of
 various sizes
 J. L. L. L.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
 During progress of work in shops --- 1913 July 23. Aug 5. Sept 2-11-20. Oct 16-21. Nov 6-19. Dec 4-10-29.
 During erection on board vessel --- 1914 Jan 12-20. Feb 5-11-27. Mar 9-16-18-25-26-31. Apr 8-10-17-27. May 5-8-12-14
 Total No. of visits 31. Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 29. 12. 13 Slides 10. 12. 13 Covers 5- 2. 14 Pistons 27- 2. 14 Rods 27
 Connecting rods 4. 12. 13 Crank shaft ^{see full report} Thrust shaft 18- 3 14 Tunnel shafts None Screw shaft 18- 3- 14 Propeller 18-
 Stern tube 25- 3- 14 Steam pipes tested 27. 4. 14 Engine and boiler seatings 31. 3- 14 Engines holding down bolts 17. #
 Completion of pumping arrangements 5- 5- 14 Boilers fixed 5- 5- 14 Engines tried under steam 14- 5- 14
 Main boiler safety valves adjusted 8- 5- 14 Thickness of adjusting washers 1/4" 1/4"
 Material of Crank shaft Iron Identification Mark on Do. 9650NCC Material of Thrust shaft S Identification Mark on Do. LL
 Material of Tunnel shafts None Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 2
 Material of Steam Pipes Copper & Iron Test pressure Copper 3 bolts Iron 5 4 bolts ✓

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines, Boiler have been built under special survey in accordance with the approved plan & the workmanship & materials are of good quality. The Machinery is eligible in my opinion for a record of LMC 5-14

It is submitted that this vessel is eligible for THE RECORD. + LMC 5. 14.

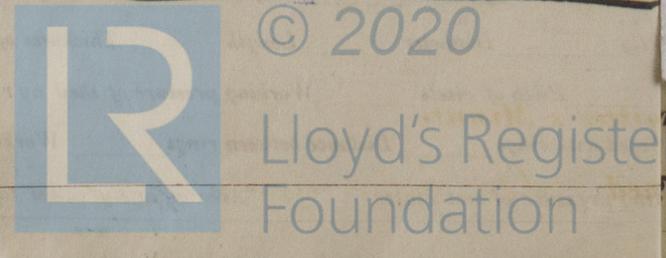
JWD
 21/5/14

Wm Gordon Muir
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships

The amount of Entry Fee .. £ 2 : - :
 Special .. £ 15 : 15 :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 18/5/14
 When received, 23/5/14

Committee's Minute GLASGOW 20 MAY 1914
 Assigned + L.M.C 5, 14.

MECHANICAL CERTIFICATE WRITTEN 21.5.14



GLASGOW

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

24/11
 18/5/14