

REPORT ON MACHINERY.

No. 38901.

Received at London Office

Date of writing Report 19 When handed in at Local Office 7/7/19 Port of Glasgow WED. JUL 9 1919
 No. in Survey held at Reg. Book. on the SS CAMBRONNE (Ocean) Date, First Survey 5/9/19. Last Survey 3rd July 1919
 Master Built at Grangemouth By whom built Grangemouth & Co. (No. 388) When built 1919
 Engines made at Glasgow By whom made do Rowan & Co. Ltd 695 when made 1919
 Boilers made at do By whom made do 695 when made 1919
 Registered Horse Power Owners Chargeurs de L'ouest Port belonging to Nantes
 Nom. Horse Power as per Section 28 433 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 25-41-68 Length of Stroke 45 Revs. per minute 82 Dia. of Screw shaft as per rule 13.5" Material of screw shaft Jam
 as fitted 14 1/2" 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 60"
 Dia. of Tunnel shaft as per rule 12.4" Dia. of Crank shaft journals as per rule 13.02" Dia. of Crank pin 1 3/4" Size of Crank webs 27 1/2 x 8 3/4" Dia. of thrust shaft under
 collars 1 3/4" Dia. of screw 16.0" Pitch of Screw 16-3 No. of Blades 4 State whether moveable No Total surface 75 ft²
 No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 1 1/2" x 7" x 18" 2 1/2" x 7" x 18" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room (2) 3" Stokes holes (2) 3" In Holds, &c. No 1-2-3-4 holds 2 in each 3"
 No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"
 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 No
 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 Both
 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 11.5.19 of Stern Tube 11.5.19 Screw shaft and Propeller 11.5.19
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper E R Platform

OILERS, &c.—(Letter for record S) Manufacturers of Steel Steel 60 of Scotland & Le Lanark & Co. Ltd
 Total Heating Surface of Boilers 6420 ft² Is Forced Draft fitted Yes No. and Description of Boilers 3 Single ended
 Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 24.4.19 No. of Certificate 14698
 Can each boiler be worked separately Yes Area of fire grate in each boiler 51.7 ft² No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 8.29 ft² 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 10 ft Mean dia. of boilers 13.92" Length 10.72" Material of shell plates Steel
 Thickness 1 1/8" Range of tensile strength 28.4-33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D & L
 long. seams TR DBS Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 18"
 Per centages of strength of longitudinal joint rivets 86.1 Working pressure of shell by rules 187 Size of manhole in shell 16x12"
 Size of compensating rings 2 x 1/2" No. and Description of Furnaces in each boiler 3 corrugated Material Steel Outside diameter 3-7"
 Length of plain part top Thickness of plates crown 1 1/2" Description of longitudinal joint welded No. of strengthening rings —
 bottom 3/2" Working pressure of furnace by the rules 190 Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 3/4" Top 1/16" Bottom 1/16"
 Pitch of stays to ditto: Sides 9 3/8 x 9 Back 10 1/2 x 9 Top 9 3/8 x 9 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 194
 Material of stays Steel Diameter at smallest part 2.03" Area supported by each stay 8.4 ft² Working pressure by rules 17 End plates in steam space:
 Material Steel Thickness 1 3/2" Pitch of stays 23 3/4 x 19 1/2 How are stays secured Nuts & W Working pressure by rules 181 Material of stays Steel
 Diameter at smallest part 8.29" Area supported by each stay 4.61 ft² Working pressure by rules 190 Material of Front plates at bottom Steel
 Thickness 3/2" Material of Lower back plate Steel Thickness 3/2" Greatest pitch of stays 13 1/2 x 9 Working pressure of plate by rules 203
 Diameter of tubes 2 3/4" Pitch of tubes 4 x 4 Material of tube plates Steel Thickness: Front 3/32" Back 3/4" Mean pitch of stays 10"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 186 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 1/2 x 3/4 (2) Length as per rule 35 1/2" Distance apart 9 3/8" Number and pitch of stays in each floor 9"
 Working pressure by rules 200 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
 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

008314-008321-0036

VERTICAL DONKEY BOILER— Manufacturers of Steel

Form with fields for No., Description, Made at, By whom made, When made, Where fixed, Working pressure, etc.

SPARE GEAR. State the articles supplied:— 2 top end bolts & nuts 2 bottom end bolts & nuts 2 main bearing bolts & nuts 6 coupling bolts & nuts set of feed and bilge pump valves nuts & washers iron and other spares

The foregoing is a correct description,

David Rowan & Co. Ltd. Manufacturer.

Dates of Survey while building: During progress of work in shops, During erection on board vessel, Total No. of visits: H5

Dates of Examination of principal parts: Cylinders 2.9.18, Slides 2.9.18, Covers 4.10.18, Pistons 11.3.19, Rods 11.3.19, Connecting rods 11.3.19, Crank shaft 28.2.19, Thrust shaft 24.3.19, Tunnel shafts 24.3.19, Screw shaft 8.4.19, Propeller 8.4.19, Stern tube 8.4.19, Steam pipes tested 9.5.19, Engine and boiler seatings 29.5.19, Engines holding down bolts 5.6.19, Completion of pumping arrangements 30.6.19, Boilers fixed 5.6.19, Engines tried under steam 3.7.19, Main boiler safety valves adjusted 30.6.19, Thickness of adjusting washers SV 3/8 P 5/16 SV 7/16 PV 3/8 SV 7/16 PV 1/4

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 approved Plans and has been seen working under steam satisfactorily. Materials and workmanship are good.

The machinery is eligible in our opinion to be Classed + LMC 7.19

It is submitted that this vessel is eligible for THE RECORD. + LMC. 7.19 F.D.

Rel. 9.7.19

JUR JIM

The amount of Entry Fee £ 3 : : When applied for, Special Charge £ 41.13.0, Donkey Boiler Fee £ 12 : : When received, Travelling Expenses (if any) £ 3 : 0 : 0

ascertained by W. Gordon Muellem, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute GLASGOW - 8 JUL 1919

Assigned + L.M.C. 7.19

MACHINERY CERTIFICATE WRITTEN 9.7.19



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GLASGOW

Certificate (if required) to be sent to

AMK