

REPORT ON MACHINERY.

No. 38199

Date of writing Report 28-9-1918 When handed in at Local Office 1-10-1918 Port of Glasgow THU. 3-OCT. 1918
 No. in Survey held at Glasgow Date, First Survey 4 June 1914 Last Survey 19-9-1918
 Reg. Book. on the Machinery in the S.S. "COLWITH FORCE" (Number of Vents 33)
 Master John Russell Built at Wokington By whom built R. Williamson & Sons Tons { Gross 805
 Engines made at Boatbridge By whom made Beardmore & Co. 489 Tons { Net 344
 Boilers made at Glasgow By whom made A. W. Dalgleish 42 641/642 when made 1918
 Registered Horse Power 100 Owners West Coast Shipping Co. Ltd Port belonging to Whitehaven
 Nom. Horse Power as per Section 28 99.6 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 24" Revs. per minute 82 Dia. of Screw shaft as per rule 8.396 Material of screw shaft as fitted 8.5
 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 No If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 36"
 Dia. of Tunnel shaft as per rule 7.44 Dia. of Crank shaft journals as per rule 4.625 Dia. of Crank pin 4 5/8 Size of Crank webs 15" 4 1/2 Dia. of thrust shaft under collars 4 5/8 Dia. of screw 10-16" Pitch of Screw 13-6" No. of Blades 4 State whether moveable No Total surface 44 ft²
 No. of Feed pumps 2 Diameter of ditto 3 Stroke 13 1/2 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 13 1/2 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6" 4" 6" + 6" 8" 8" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4" 2 1/2 In Holds, &c. 2" 2"
 No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump No Is a separate Donkey Suction fitted in Engine room & size Yes 2 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 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 Hold suction How are they protected Wood trunkways
 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 (Please See Stirling Wokington Report 9/18)
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel
 Total Heating Surface of Boilers 14900 Is Forced Draft fitted No No. and Description of Boilers 2 Single ended marine
 Working Pressure 180 lbs Tested by hydraulic pressure to — Date of test — No. of Certificate —
 Can each boiler be worked separately Yes Area of fire grate in each boiler 32.5 ft² No. and Description of Safety Valves to each boiler Pair Spring loaded Area of each valve 3.94 ft² Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
 Smallest distance between boiler or uptakes and bunkers or woodwork 4-6" 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 manholes 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 —
 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 — Distances 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 —

4610-5101M

IS A DONKEY BOILER FITTED? 70

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

2 Connecting rod top end, 2 Connecting rod bottom end bolts & nuts, 2 1/2 in bearing bolts, 1 set of coupling bolts, a quantity of assorted bolts & nuts, 1 set of feed & bilge pump valves. Sum of various

The foregoing is a correct description,

For WILLIAM BEARDMORE & CO., LIMITED.

Manufacturer. R Sneddon.

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - - -

Total No. of visits

1917 June 4, 22 July 26, 6/19, 24 Oct. 25, 1918 Jan 22, 23 Apr 17, 30 May 26, 2020 June 6, 21 July 2, 1919 6, 9, 19, 20, 21, 26, 28, 29, 8/6, 24, 6, 9, 14, 18, 19

Is the approved plan of main boiler forwarded herewith? yes

Dates of Examination of principal parts - Cylinders 20-4-18 Slides 14-5-18 Covers 20-4-18 Pistons 14-5-18 Rods 14-5-18

Connecting rods 14-5-18 Crank shaft 14-4-18 Thrust shaft 6-5-18 Tunnel shafts 9-4-18 Screw shaft 6-5-18 Propeller 30-4-18

Stern tube 14-4-18 Steam pipes tested 29-8-18 Engine and boiler seatings 9-8-18 Engines holding down bolts 4-9-18

Completion of pumping arrangements 14-9-18 Boilers fixed 4-9-18 Engines tried under steam 19-9-18

Main boiler safety valves adjusted 14-9-18 Thickness of adjusting washers 4/16 - 4/16 + 3/8 - 3/8

Material of Crank shaft 8. Identification Mark on Do. 505 14-4-18 8.24 Material of Thrust shaft 8. Identification Mark on Do. 505 6-5-18 3.M.

Material of Tunnel shafts 9me Identification Marks on Do. Material of Screw shafts 8. Identification Marks on Do. 505 6-5-18 3.M.

Material of Steam Pipes Copper Test pressure 360 lbs

Is an installation fitted for burning oil fuel 70 Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case 70 If so, state name of vessel

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

The Machinery has been built under Special Survey in accordance with the Rules of the Society & has been securely fitted on board, tried under full working conditions & found satisfactory.

The workmanship & materials are of good quality throughout. The Machinery of this vessel is eligible, in my opinion, to have notation in the Register Book. + L.M.C 9-18.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 9.18

J. F. 5.10.18 J. F. 5.10.18

The amount of Entry Fee ... £ 1 : 0 : 0 When applied for, Special ... £ 15 : 0 : 0 When received, Donkey Boiler Fee ... Travelling Expenses (if any) £

Committee's Minute GLASGOW 2-OCT-1918 Assigned + L.M.C 9.18

subject to classification of hull

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

+ L.M.C 9.18

Lloyd's Register Foundation