

Received at London Office

Date of writing Report 30 APR 1918 when handed in at Local Office - 1 MAY 1918 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 9 Nov 17 Last Survey 23 July 1918
 Reg. Book. on the new steel s/s War Muskel (Number of Visits 2344.7)
 Master Bristol Built at Bristol By whom built Hill & Son (S/N 127) When built 1918
 Engines made at Sunderland By whom made MacLellan & Pollock Ltd (No 288) when made 1918
 Boilers made at Parsby By whom made A. T. Craig & Co Ltd when made 1918
 Registered Horse Power 359 Owners Manager Port belonging to
 Nom. Horse Power as per Section 28 358.9 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 70 Dia. of Screw shaft as per rule 13.4 Material of 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 No 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 Yes Length of stern bush 5.0
 Dia. of Tunnel shaft as per rule 2.91 Dia. of Crank shaft journals as per rule 13.92 Dia. of Crank pin 13.2 Size of Crank webs 8.3 x 20 Dia. of thrust shaft under
 collars 13.2 Dia. of screw 15.6 Pitch of Screw 17.0 No. of Blades 4 State whether moveable No Total surface 75 sq
 No. of Feed pumps 2 Diameter of ditto 3.2 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3.2 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 4 Sizes of Pumps 2 1/2, 2, 1 1/2, 1 1/4 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three of Three inch In Holds, &c. Fore Hold Two of Three inch, No 2 two of 5
No 3 Two of 3, No 4 Two of 3, No 5 one of 3 Forward Well one of 2 1/2
 No. of Bilge Injections One size Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes
 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 Yes
 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 Fore Hold suction, Cast iron pipe How are they protected At sides of vessel
 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 1.5.18 of Stern Tube 9.5.18 Screw shaft and Propeller 24.5.18
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door No worked from Two escapes

BOILERS, &c.—(Letter for record See Report Glasgow 37818) Manufacturers of Steel See Report Glasgow 37818
 Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
 Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate
 Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to
 each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
 Smallest distance between boilers or uptakes and bunkers or woodwork 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 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 Thickness of plates 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 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

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - 2 Connecting rods, 2 top end, 2 bottom end, 2 Main bearing bolts & nuts, 3 coupling bolts for crank shaft & 3 for tunnel shafting, 1 Feed pump section & 1 discharge valve, 1 Bilge section & 1 delivery valve, 3 main & 3 Donkey Feed checks, 24 bolts & nuts assorted, 6 Cylinder cover nuts & studs, 12 Junk ring studs & nuts, Iron assorted, 1 propeller, 2 Safety Valve springs

The foregoing is a correct description,

MAO COLL & POLLOCK LTD,

W. Pollock Manufacturer.

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1917 Nov 9, 22, 23, 28, Dec 12, 19, 20, Jan 4, 8, 9, 11, 14, 17, 21, 23, 28, 29, 31, Feb 5, 6, 14, 25, 27, Mar 5, 11, 13, 18, 19, Apr 3, 5, 8, 15, 16, 24. During erection on board vessel - April 9-24, May 1, 22-27, June 5, 12-17, 19-25, July 4, 8-11-18, 22-23. Total No. of visits: Is the approved plan of main boiler forwarded herewith *yes* " " " donkey " " " *now*

Dates of Examination of principal parts - Cylinders 14-1-18 Slides 13-4-18 Covers 14-2-18 Pistons 14-1-18 Rods 14-1-18 Connecting rods A-2-18 Crank shaft 8th Thrust shaft 3-4-18 Tunnel shafts 18-3-18 Screw shaft 8-3-18 Propeller 19-2-18 Stern tube 19-2-18 Steam pipes tested 5 1/2 cent attached Engine and boiler seatings 24-5-18 Engines holding down bolts 19-6-18 Completion of pumping arrangements 18-7-18 Boilers fixed 12-6-18 Engines tried under steam 23-7-18 Main boiler safety valves adjusted 22-7-18 Thickness of adjusting washers 3/8 5/16 5/16 5/8 Material of Crank shaft *Steel* Identification Mark on Do. *45989AM* Material of Thrust shaft *Steel* Identification Mark on Do. *3377N WC* Material of Tunnel shafts *Steel* Identification Marks on Do. *3377N WC* Material of Screw shafts *Steel* Identification Marks on Do. *3377N WC* Material of Steam Pipes *Lapwelded steel* Test pressure *540 lbs per sq in* Is an installation fitted for burning oil fuel *no* 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 *yes* If so, state name of vessel *Standard D type*

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

The material and workmanship is good. The machinery was constructed under special survey and has been forwarded to Bristol to be fitted in the vessel. Bristol surveyors advised these Engines & the Boilers (Glasgow report 37818 attached) have now been fitted on the above vessel. The Safety Valves have been adjusted to 185 lbs & bearing gear has been fitted. The Main stop valves have been fitted with extensions & can be closed from bridge deck & non return valves have been fitted on bilge suction at bulkheads on side of stumps. The engines have been tried on a run from Bristol to Port Talbot & worked in a satisfactory manner.

This vessel's machinery in my opinion is eligible for record. F.L.M.C-7-18. It is submitted that this vessel is eligible for THE RECORD + L.M.C 7.18. F.D.

1/3 Proportion of Fee £156-6-0 as under

The amount of Entry Fee £ 26: 1: 0 When applied for. Engines 1/2 Machinery fee £ 13: 0: 6 When received. Special due to spec £ 13: 0: 6 Donkey Boiler Fee £ 13: 0: 6 Travelling Expenses (if any) £ 3: 0: 0

W.D. 2/8/18 *G.A.* *Sh. Davis & G. A. Myden Toyne* Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. 22. 13. 06. 1918* Assigned *+ L.M.C 7.18 F.D.*

MACHINERY DEPT. WRITTEN.

+ cert. copy 10/3/22



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SUNDERLAND

Committee (if requested) to be sent to the Registrar of Shipping (if requested) to be sent to the Registrar of Shipping