

REPORT ON MACHINERY.

No. 27754

Received at London Office

SAT. 13 MAR. 1920

4. Writing Report 9-3-1919 When handed in at Local Office 10-3-1919 Port of Sunderland
 in Survey held at Sunderland Date, First Survey 20 June 19 Last Survey 10th March 1920
 Book. on the Machinery of the new Steel S.S. A FONTOWY (Number of Visits 3)
 Built at Southampton By whom built Messrs. Tibbles, Ltd. Tons { Gross 684
 Net 336
 When built 1920
 Made at Sunderland By whom made Messrs. MacCall & Pollock, Ltd. (No. 291) when made 1920
 By whom made " " " when made 1920
 Registered Horse Power 102 Owners W. Booths Port belonging to Stanley
 Horse Power as per Section 28 102 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

INES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 of Cylinders 14, 23, 39 Length of Stroke 27 Revs. per minute 105 Dia. of Screw shaft as per rule 7 1/8 Material of screw shaft as fitted
 Is the after end of the liner made water tight 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
 between 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'-10"
 of Tunnel shaft as per rule 7 1/8 Dia. of Crank shaft journals as per rule 7 1/8 Dia. of Crank pin 7 1/8 Size of Crank webs 11x4 5/8 Dia. of thrust shaft under
 of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 14 Can one be overhauled while the other is at work Yes
 of Donkey Engines 2 Sizes of Pumps 4 1/2 x 3 x 6, 6 x 7 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 4 @ 2" In Holds, &c. 2 @ 2" Forward

of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes; 3"
 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 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
 How are they protected Slumber boards
 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
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from Machinery aft

MANUFACTURERS, &c.—(Letter for record S) Manufacturers of Steel John Spencer & Sons, Ltd., & John Brown & Co., Ltd.
 Total Heating Surface of Boilers 1892 sq ft Is Forced Draft fitted No No. and Description of Boilers Two single ended Marine
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 11-11-19 No. of Certificate 3627
 Can each boiler be worked separately Yes Area of fire grate in each boiler 30 sq ft No. and Description of Safety Valves to
 each boiler Two, spring loaded Area of each valve 3.97 sq ft Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 4'-0" Mean dia. of boilers 10'-5" Length 10'-3" Material of shell plates Steel
 Thickness 29 Range of tensile strength 28 3/4 to 32 3/4 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. laps
 g. seams D.B.S., D.R. Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 5 9/32 Lap of plates or width of butt straps 11 1/4
 Percentages of strength of longitudinal joint rivets 82 Working pressure of shell by rules 181 Size of manhole in shell 16 x 12
 plate 80
 Size of compensating ring 7 x 29 No. and Description of Furnaces in each boiler 2 Plain Material Steel Outside diameter 37 1/2
 Length of plain part top 6-6 bottom 5-9 Thickness of plates crown 23 bottom 32 Description of longitudinal joint welded No. of strengthening rings —
 Working pressure of furnace by the rules 185 Combustion chamber plates: Material Steel Thickness: Sides 5/8 Back 5/8 Top 1 1/16 Bottom 7/8
 Pitch of stays to ditto: Sides 7 3/4 x 9 5/8 Back 8 3/4 x 8 3/8 Top 7 3/4 x 10 3/4 If stays are fitted with nuts or riveted heads nuts inside Working pressure by rules 182
 Material of stays Steel Area at smallest part 1.43 sq ft Area supported by each stay 83 sq ft Working pressure by rules 189 End plates in steam space:
 Material Steel Thickness 1 1/2 Pitch of stays 14 x 14 How are stays secured D.N.T.W. Working pressure by rules 184 Material of stays Steel
 Area at smallest part 3.26 sq ft Area supported by each stay 196 sq ft Working pressure by rules 183 Material of Front plates at bottom Steel
 Thickness 5 1/16 Material of Lower back plate Steel Thickness 7/8 Greatest pitch of stays 12 1/2 Working pressure of plate by rules 233
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates Steel Thickness: Front 1 5/16 Back 1 3/16 Mean pitch of stays 13 1/8 x 9
 Pitch across wide water spaces 13 1/2 Working pressures by rules 185 Girders to Chamber tops: Material Steel Depth and
 Thickness of girder at centre 4 5/8 x 13 1/4 Length as per rule 26 3/4 Distance apart 10 3/4 Number and pitch of stays in each 2 @ 7 3/4
 Working pressure by rules 183 Steam dome: description of joint to shell — % of strength of joint —
 Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
 Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed
 SUPERHEATER. Type — Date of Approval of Plan — Tested by Hydraulic Pressure to —
 Date of Test — Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler —
 Diameter of Safety Valve — Pressure to which each is adjusted — Is Easing Gear fitted —

WI-0036

IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two Connecting rod tops & bottom end Bolts & nuts, two main bearing bolts & nuts; one set of Coupling bolts & nuts, one set each of Feed & Blow pump valves; a quantity of Bolts, nuts, & Iron of various sizes.

The foregoing is a correct description,

MACPOLL & POLLOCK, LTD.

J. R. Richardson Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1919 Jan 20 Aug 1, 13, 16, 22 Sep 8, 22 Oct 1, 7, 14, 20 Nov 3, 11, 19 Dec 5, 18; During erection on board vessel -- Jan 7, 14, 21, 23, 30, 31 Feb 2, 12, 17, 18, 25, 28 Mar 1, 2, 10; Total No. of visits 31. Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts: Cylinders 9-9-19 Slides 3-11-19 Covers 17-2-20 Pistons 28-2-20 Rods 14-10-19 Connecting rods 14-10-19 Crank shaft 8-9-19 Thrust shaft 13-9-19 Tunnel shafts None Screw shaft 13-9-19 Propeller 28-2-20 Stern tube 22-9-20 Steam pipes tested 31-1-20 Engine and boiler seatings 23-1-20 Engines holding down bolts 2-2-20 Completion of pumping arrangements 1-3-20 Boilers fixed 23-1-20 Engines tried under steam 2-3-20 Completion of fitting sea connections 23-1-20 Stern tube 23-1-20 Screw shaft and propeller 1-3-20 Main boiler safety valves adjusted 18-2-20 Thickness of adjusting washers P. boiler p. 11/32, S 5/16; S boiler p. 5/16, S 5/16. Material of Crank shaft Inf. Steel Identification Mark on Do. N° 855 J.H.M. Material of Thrust shaft Inf. Steel Identification Mark on Do. N° 855. Material of Tunnel shafts None Identification Marks on Do. Material of Screw shafts Copper Identification Marks on Do. N° 855. Material of Steam Pipes Copper Test pressure 360 lbs. 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 No. If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c.) The Workmanship & Materials are good. The Machinery has been constructed under special survey and is eligible in our opinion for classification, and the record * L.M.C. 3, 20.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3, 20.

Handwritten signatures and date: 15/3/20

SUNDERLAND

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for, Special ... £ 15 : 6 : 0 12 MAR 1920 Donkey Boiler Fee ... £ Travelling Expenses (if any) £ When received, 1/5/19 20 APR 19

Ed. W. Rutter, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Assigned TUE 16 MAR 1920 + L.M.C. 3, 20



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