

COPY

pt. 4.

REPORT ON MACHINERY

No. 39326

Received at London Office

THU. MAR. 25 1919

Place of writing Report 19 When handed in at Local Office 7/11/19 Port of GLASGOW
 Date, First Survey 17 Sept. 1918 Last Survey 24 October 1919
 on the Main Engines "No 2F" (for Goughland & Sons, Vancouver, B.C.) (Number of Visits 26)
 Built at Glasgow By whom built D & W Anderson & Co. Ltd when made 1919
 Engines made at Glasgow By whom made D & W Anderson & Co. Ltd when made 1919
 Boilers made at _____ By whom made _____ when made _____
 Registered Horse Power _____ Owners _____ Port belonging to _____
 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

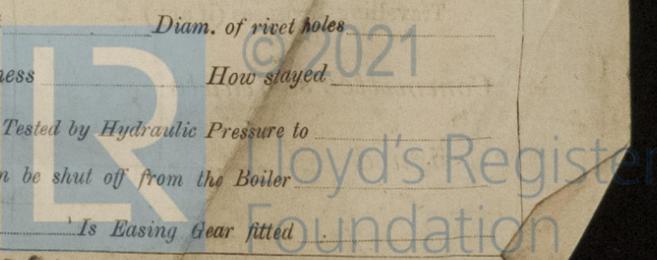
ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 27" 44" 73" Length of Stroke 48 Revs. per minute _____
 Dia. of Screw shaft as per rule 14.7" Material of screw shaft _____
 the screw shaft fitted with a continuous liner the whole length of the stern tube _____
 Is the after end of the liner made water tight _____
 the propeller boss _____ 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 _____
 If two liners are fitted, is the shaft lapped or protected between the liners _____ Length of stern bush _____
 Dia. of Tunnel shaft as per rule 13.3" Dia. of Crank shaft journals as per rule 13.9" Dia. of Crank pin 14.2" Size of Crank webs 9 x 28" Dia. of thrust shaft under _____
 Dia. of screw _____ Pitch of Screw _____ No. of Blades _____ State whether moveable _____ Total surface _____
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work _____
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work _____
 No. of Donkey Engines _____ Sizes of Pumps _____ No. and size of Suctions connected to both Bilge and Donkey pumps _____
 In Holds, &c. _____

No. of Bilge Injections _____ sizes _____ Connected to condenser, or to circulating pump _____ Is a separate Donkey Suction fitted in Engine room & size _____
 Are all the bilge suction pipes fitted with roses _____ Are the roses in Engine room always accessible _____ Are the sluices on Engine room bulkheads always accessible _____
 Are all connections with the sea direct on the skin of the ship _____ Are they Valves or Cocks _____
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ Are the Discharge Pipes above or below the deep water line _____
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel _____ Are the Blow Off Cocks fitted with a spigot and brass covering plate _____
 What pipes are carried through the bunkers _____ How are they protected _____
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times _____
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges _____
 Is the Screw Shaft Tunnel watertight _____ Is it fitted with a watertight door _____ worked from _____

BOILERS, &c.—(Letter for record _____) Manufacturers of Steel _____
 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 _____
 Attach 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 _____
 Percentages 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 _____ Area 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 _____
 Area 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 _____ 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 _____

111335-0096



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Top end bolts & nuts 2 bottom end bolts & nuts 6 coupling bolts & nuts, 2 main bearing bolts & nuts, 1 set of feed and bilge pump valves, Bolts & nuts assorted Iron and other articles as required by Specification.

The foregoing is a correct description,

For David & Wm Henderson & Co Ltd.

Manufacturer. (Sgd) A Patrick Director

Dates of Survey while building { During progress of work in shops -- } 1918 Sept 17, 20, 23, 24 Oct 1, 8, 9, 14, 29 Nov 20 1919 Jan 9, 29 Mar 17 Apr 8, 30. In June 4 '10
 { During erection on board vessel --- } July 8 Sept 12 Oct 10, 15, 22, 24.
 Total No. of visits 26

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 8.4.19 Slides 8.4.19 Covers 8.4.19 Pistons 4.6.19 Rods 4.6.19
 Connecting rods 8.7.19 Crank shaft 1.5.19 Thrust shaft — Tunnel shafts — Screw shaft — Propeller —
 Stern tube — Steam pipes tested — Engine and boiler seatings — Engines holding down bolts —
 Completion of pumping arrangements — Boilers fixed — Engines tried under steam —
 Completion of fitting sea connections — Stern tube — Screw shaft and propeller —
 Main boiler safety valves adjusted — Thickness of adjusting washers —
 Material of Crank shaft Steel Identification Mark on Do. H.C. 2 F.S. 19 Lloyd's Material of Thrust shaft — Identification Mark on Do. —
 Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts — Identification Marks on Do. —
 Material of Steam Pipes — Test pressure —

Is an installation fitted for burning oil fuel 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. These main engines have been constructed under special survey in accordance with the Rules and approved plans. Materials and workmanship are good.

The engines from after end of crankshaft up to and including triple branch piece on engine stop valve have now been despatched to Messrs Goughlan & Sons, Vancouver, B.C.

The work covered by the specification has been satisfactorily carried out and completed, with the following exceptions:—
 The cylinders and casings have not been tested by hydraulic pressure
 (2) The "Contraflo" attachment for the condenser, which is being supplied by the Contraflo Co., has not been fitted in place. The maker's arrangements are being made for this work to be completed on arrival of the engines in Canada.

Machinery Construction Fees, See London Sec 2 Letter A Dec 21

The amount of Entry Fee	£	:	:	When applied for,
Special	£	:	:	19
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19

(Sgd) Jas. Casthope
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Glasgow 11 Nov /1919
 Assigned No action

FRI JUN 4 1920
 FRI DEC 31 1920
 TUE MAR 15 1921
 TUE 27 JUN 1921
 FRI 10 MAR 1922



Certificate (if required) to be sent to the Surveyors are requested not to write on this space for Committee's Minutes.