

REPORT ON MACHINERY.

No. 12197

Received at London Office

FRI. 28. M.

Date of writing Report 19 When handed in at Local Office 19 Port of Aberdeen

No. in Survey held at Aberdeen Date, First Survey April 23 1918 Last Survey Feb 13 1919

Reg. Book. on the S.S. "Hadrix" (Number of Visits)

Master John Lewis & Sons Built at Aberdeen By whom built John Lewis & Sons When built 1919

Engines made at Aberdeen By whom made John Lewis and Sons when made 1919

Boilers made at Paisley By whom made A.J. Craig & Co. Ltd. when made 1919

Registered Horse Power R. Rice Owners R. Rice Port belonging to Hull

Nom. Horse Power as per Section 28 105 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" x 24" x 39" Length of Stroke 27 Revs. per minute 88 Dia. of Screw shaft 8 1/4 Material of screw shaft Iron

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 turned one length 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 space If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 3'-0 1/4"

Dia. of Tunnel shaft 4.17 Dia. of Crank shaft journals 7.23 Dia. of Crank pin 7 3/4 Size of Crank webs 10 1/2 x 5 3/8 Dia. of thrust shaft under collars 7 5/8 Dia. of screw 10'-0" Pitch of Screw 14'-0" No. of Blades 4 State whether moveable no Total surface 40 ft

No. of Feed pumps 2 Diameter of ditto 2 3/4 Stroke 13 1/2 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2 3/4 Stroke 13 1/2 Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps Ballast 6 x 8 1/2 x 6 Donkey 5 1/2 x 3 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room two of 2 1/2 Boiler room one 2 In Holds, &c. two 2 Aft peak one 2

No. 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 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 none

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 yes

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 suctions from hold and ballast tanks How are they protected wood casings

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 yes

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel

Total Heating Surface of Boilers 1894 Is Forced Draft fitted no No. and Description of Boilers one single ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 13-2-18 No. of Certificate 14104

Can each boiler be worked separately yes Area of fire grate in each boiler 54 ft No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 5.94 Pressure to which they are adjusted 185 lbs Are they fitted with casing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork no side bunkers Mean dia. of boilers 13'-9" Length 10'-6" 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 rivet 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

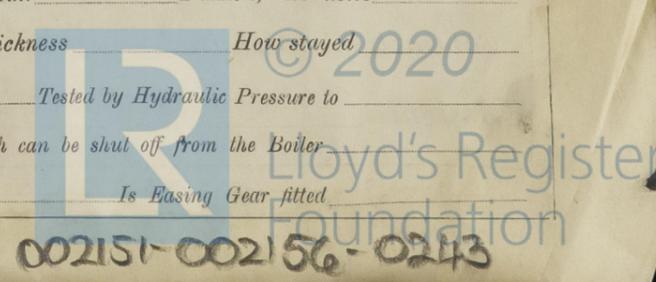
SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

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 Flasing Gear fitted

If not, state whether and when, one will be sent

Is a Report also sent on the Hull of the Ship?



IS A DONKEY BOILER FITTED? *No.* If so, is a report now forwarded?

SPARE GEAR: State the articles supplied:— *Two top end and two bottom end bolts and nuts two main bearing bolts and nuts, one set of coupling bolts and nuts, one set each Air Circulating, Feed & bilge pump valves, one main & one donkey check valve lid, one safety valve spring bolts & nuts and iron of various sizes*

The foregoing is a correct description,

JOHN LEWIS & SONS, LTD.
John D. Donald Manufacturers

Dates of Survey while building
 During progress of work in shops: *1918 April 22, 24, May 24, June 3, 27, Aug 19, 22, 23, Oct 19, 29, 31, Nov 7, 8, 13, 15, 26, 29, Dec 16, 17, 1919 Jan 9, 14, 15, 16*
 During erection on board vessel: *1919 Jan 20, 27, 31, Feb 5, 10, 11, 12, 13*
 Total No. of visits: *32* Is the approved plan of main boiler forwarded herewith?
 " " " donkey " " "

Dates of Examination of principal parts—Cylinders *19-8-18* Slides *31-10-18* Covers *7-11-18* Pistons *31-10-18* Rods *8-11-18*
 Connecting rods *22-8-18* Crank shaft *29-10-18* Thrust shaft *9-1-19* Tunnel shafts Screw shaft *9-1-19* Propeller *17-12-18*
 Stern tube *17-12-18* Steam pipes tested *31-1-19* Engine and boiler seatings *13-1-19* Engines holding down bolts *27-1-19*
 Completion of pumping arrangements *5-2-19* Boilers fixed *27-1-19* Engines tried under steam *11-2-19*
 Completion of fitting sea connections *15-1-19* Stern tube *13-1-19* Screw shaft and propeller *15-1-19*
 Main boiler safety valves adjusted *11-2-19* Thickness of adjusting washers *Port Valve 5/8 Star valve 3/8*
 Material of Crank shaft *Iron* Identification Mark on Do. *706 DUN* Material of Thrust shaft *Steel* Identification Mark on Do. *226A*
 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts *Iron* Identification Marks on Do. *227A*
 Material of Steam Pipes *solid drawn copper* Test pressure *360 lbs per sq*
 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 *"Dragoon"*

General Remarks (State quality of workmanship, opinions as to class, &c.)
These engines have been constructed under special survey and in accordance with the Secretary's letters, the Rules and approved plan. The material and workmanship are good. They together with the boiler Glasgow Report N° 37497 have now been properly fitted on board the vessel and tried under steam with satisfactory results and are eligible in my opinion to have the notation of LMC 2-19 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 2-19.

JWD 2/3/19
ARR

Reginald Bain
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ *2 : 0* :
 Special ... £ *9 : 9* :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 19...
 When received, 16-4-19

Committee's Minute *FRI. 4-APR. 1919*

Assigned *+ L.M.C. 2:19*

MACHINERY OF ST... WRITTEN



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