

## 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  
Reg. Book.

Aberdeen

Date, First Survey April 23<sup>rd</sup> 1918 Last Survey Feb 13<sup>th</sup> 1919

(Number of Visits)

on the

S.S. "Hadrix"

Master

Built at Aberdeen

By whom built

John Lewis &amp; Sons

Gross  
Tons  
Net

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 &amp; Co. Ltd

when made 1919

Registered Horse Power

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, &amp;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

as per rule 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 burned one length

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

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

as per rule 4 1/2"

Dia. of Crank shaft journals

as per rule 7 1/2"

Dia. of Crank pin

7 3/4"

Size of Crank webs

10 1/2" x 5 1/2"

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

6 x 8 1/2" x 6"

No. and size of Suctions connected to both Bilge and Donkey pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

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, &amp;c.

two 2"

Aft peak one 2"

Aft peak one 2"

Aft peak one 2"

Aft peak one 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 &amp; size

yes 2 1/2"

yes 2 1/2"

yes 2 1/2"

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

both

both

both

both

both

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

yes

yes

yes

yes

yes

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

yes

yes

yes

yes

yes

yes

What pipes are carried through the bunkers

suctions from hold and ballast

How are they protected

wood casings

wood casings

wood casings

wood casings

wood casings

wood casings

wood casings

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

yes

yes

yes

yes

yes

yes

yes

yes

yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

yes

yes

yes

yes

yes

yes

yes

yes

yes

Is the Screw Shaft Tunnel watertight

none

Is it fitted with a watertight door

yes

yes

yes

yes

yes

yes

yes

## BOILERS, &amp;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

one single ended

one single ended

one single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

13-2-18

No. of Certificate

14104

14104

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

each boiler

each boiler

each boiler

each boiler

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

Material of shell plates

Material of shell plates

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Descrip. of riveting: cir. seams

Descrip. of riveting: cir. seams

Descrip. of riveting: cir. seams

Descrip. of riveting: cir. seams

Descrip. of riveting: cir. seams

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

Lap of plates or width of butt straps

Lap of plates or width of butt straps

Lap of plates or width of butt straps

Lap of plates or width of butt straps

Lap of plates or width of butt straps

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of manhole in shell

Size of manhole in shell

Size of manhole in shell

Size of manhole in shell

Size of manhole in shell

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Outside diameter

Outside diameter

Outside diameter

Outside diameter

Outside diameter

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

No. of strengthening rings

No. of strengthening rings

No. of strengthening rings

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Bottom

Bottom

Bottom

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or rivet heads

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Area at smallest part

Area supported by each stay

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Working pressure by rules

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Working pressure of plate by rules

Working pressure of plate by rules

Working pressure of plate by rules

Working pressure of plate by rules

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Mean pitch of stays

Mean pitch of stays

Mean pitch of stays

Mean pitch of stays



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.

James J. 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 6, 16, 17, Jan 9, 1919  
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

Is the approved plan of main boiler forwarded herewith

Is the approved plan of main boiler forwarded herewith

Is the approved plan of main boiler forwarded herewith

Is the approved plan of main boiler forwarded herewith

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 ✓ Identification Mark on Do. 706 DUN Material of Thrust shaft ✓ Identification Mark on Do. 226A  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts ✓ 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

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 + LMC 2.19

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

Lloyd's Register Foundation