

## REPORT ON MACHINERY.

No. 31174

Received at London Office

Date of writing Report

19

When handed in at Local Office

26/6/19 Port of Hull.

No. in Survey held at Hull.

Date, First Survey Oct 9/18

Last Survey

20/6/1919

Reg. Book.

(Number of Visits 32)

Gross 324.

on the S.T. DANIEL MUNRO

Net 149.

Master

Built at Selby

By whom built

Tadman &amp; Sons Ltd

When built 1919

Engines made at Hull

By whom made

Thos J. Holmes &amp; Co Ltd

when made 1919

Boilers made at Hull

By whom made

Do Co

when made 1919

Registered Horse Power

Owners Capt A.V. COLE R.A.F

Port belonging to

Nom. Horse Power as per Section 28 87

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

NGINES, &amp;c.—Description of Engines

Triple expansion.

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 13-23-37

Length of Stroke 20

Revs. per minute 115

Dia. of Screw shaft

as per rule 8.22

Material of

Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No

Is the after end of the liner made water tight

In 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

By liners (Vickers type)

Length of stern bush 36

Dia. of Tunnel shaft

as per rule 7.04

Dia. of Crank shaft journals

as per rule 7.30

Dia. of Crank pin 12

Size of Crank webs 16x11

Dia. of thrust shaft under

Collars 15

Dia. of screw 9-7 1/2

Pitch of Screw 11-0

No. of Blades 4

State whether moveable No

Total surface 33 1/2

No. of Feed pumps one

Diameter of ditto 2 1/2

Stroke 14 1/2

Can one be overhauled while the other is at work

No. of Bilge pumps one

Diameter of ditto 2 1/2

Stroke 14 1/2

Can one be overhauled while the other is at work

No. of Donkey Engines one

Size of Pumps 8" 4 1/2 x 8"

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

In Holds, &amp;c. one 2" dia in each compartment

In Engine Room

Two 2" dia

all motions also connected to ejectors

No. of Bilge Injections one

size 3 1/2

Connected to condenser, or circulating pump

Is a separate Donkey Suction fitted in Engine room &amp; size 3" ejector

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

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Both

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

above

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

Are

What pipes are carried through the bunkers

Full motion &amp; direct steam

How are they protected

Thermoplastic

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

Are

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

Are

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &amp;c.—(Letter for record 5.)

Manufacturers of Steel

Pat Talbot &amp; J. Spencer &amp; Sons

Total Heating Surface of Boilers 1440 1/2

Is Forced Draft fitted No

No. and Description of Boilers one triple ended multi

Working Pressure 200 lbs

Tested by hydraulic pressure to 400 lbs

Date of test 25/3/19

No. of Certificate 3346

Can each boiler be worked separately

Area of fire grate in each boiler 48 1/2

No. and Description of Safety Valves to

Each boiler Two spring loaded

Area of each valve 4.9 1/2

Pressure to which they are adjusted 205 lbs

Are they fitted with easing gear

Are

Smallest distance between boilers or uptakes and bunkers on woodwork 8" 1/2

Mean dia. of boilers 165

Length 10' 8"

Material of shell plates

Steel

Thickness 1 1/2

Range of tensile strength 28-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Double

Ing. seams TR D.B.S.

Diameter of rivet holes in long. seams 1 1/2

Pitch of rivets 8 5/8

Lap of plates or width of butt straps 18"

No. of strengthening rings

No

Percentage of strength of longitudinal joint

rivets 85.90%

plate 85.50%

Working pressure of shell by rules 202 lbs

Size of manhole in shell 16" x 12"

No. of compensating ring

No

Size of plain part

top 18 1/2

Thickness of plates

crown 3 1/8

Description of longitudinal joint

welded

No. of strengthening rings

No

Working pressure of furnace by the rules 200

Combustion chamber plates: Material

Steel

Thickness: Sides 3/4

Back 3/4

Top 3/4

Bottom 3/4

Pitch of stays to ditto: Sides 10 x 8

Back 9 1/2 x 8 1/2

Top 11 x 8

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules 208

No

Material of stays

Steel

Area at smallest part 2.07

Area supported by each stay 88

Working pressure by rules 211

End plates in steam space:

No

Material

Steel

Thickness 1 1/2

Pitch of stays 19 x 17 1/2

How are stays secured

2 1/4 x 1 1/4

Working pressure by rules 210

Material of stays

Steel

Area at smallest part 7.5

Area supported by each stay 335

Working pressure by rules 233

Material of Front plates at bottom

Steel

Thickness 1 1/2

Greatest pitch of stays 13 1/2 x 9 1/2

Working pressure of plate by rules 218

No

Thickness 1 1/2

Material of Lower back plate

Steel

Thickness 1 1/2

Material of tube plates

Steel

Thickness: Front 1 1/2

Back 1 1/2

Mean pitch of stays 10"

Diameter of tubes 3 1/2

Pitch of tubes 4 1/2

Working pressures by rules 275

Girders to Chamber tops: Material

Steel

Depth and

Thickness of girder at centre 11 1/2

Length as per rule 36.2

Distance apart 11"

Working pressure by rules 201

Steam dome: description of joint to shell

No

% of strength of joint

No

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

No

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

No

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

No

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

No

Diameter of Safety Valve

Pressure to which each is adjusted

No

Is Easing Gear fitted

No

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IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—Two top end bolts & nuts, two main bearing bolts & nuts, two bottom end bolts & nuts, one set coupling bolts & nuts, one set air feed & bilge pump valves, 1 pump ring thrust & nuts, one main & one donkey check valve, two valves for donkey pump, one safety valve spring, three condenser tubes, one set fuel bar, & a quantity of bolts & nuts & wire of various sizes.

The foregoing is a correct description,

CHARLES D. HOLMES & CO. LTD.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1918. Oct 9. 24. 26. 28. 29. 31. Nov 8. 15. 22. 26. 30. Dec 6. 10. 18. 24. 30. 31. 1919. Jan 3  
During erection on board vessel -- 15. 16. 20. 30. 31. Mar 6. 10. 25. Apr 5. 10. Jun 5. 11. 18. 20  
Total No. of visits 32.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 24/12/18 Slides 24/12/18 Covers 10/4/19 Pistons 16/1/19 Rods 3/1/19  
Connecting rods 3/1/19 Crank shaft 15/1/19 Thrust shaft 6/2/19 Tunnel shafts - Screw shaft 26/10/18 Propeller 26/10/18  
Stern tube 26/10/18 Steam pipes tested 11/8/19 Engine and boiler seatings 28/10/18 Engines holding down bolts 5/4/19  
Completion of pumping arrangements 20/6/19 Boilers fixed 18/6/19 Engines tried under steam 20/6/19  
Completion of fitting sea connections 31-10-18 Stern tube 31/10/18 Screw shaft and propeller 31/10/18  
Main boiler safety valves adjusted 18/6/19 Thickness of adjusting washers 5 3/8" 7 3/8"  
Material of Crank shaft Steel Identification Mark on Do. 2199 Material of Thrust shaft Steel Identification Mark on Do. 2302  
Material of Tunnel shafts - Identification Marks on Do. - Material of Screw shafts Steel Identification Marks on Do. 2177  
Material of Steam Pipes Copper Test pressure 400 lbs. 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 Mercantile class.

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

The engines & boiler of this vessel have been built under special survey, and the materials & workmanship are good. On completion they were examined while running full power trials in the Dumbarton and found satisfactory. The machinery throughout is now in good & efficient condition & eligible in my opinion to have the record L.M.C.-6.19 marked in red in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 6.19

27/6/19

GRK

The amount of Entry Fee ... £ 2-0-0  
Special ... £ 26-2-0  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 26/6/19  
When received, 18/7/19

Charlotte  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. JUL. 1-1919

Assigned

+ L.M.C. 6.19



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