

REPORT ON MACHINERY

No. 27147

SAT. 2 FEB. 1918

Received at London Office

Writing Report

10

When handed in at Local Office

1 FEB. 1918

Port of

SUNDERLAND

Survey held at

SUNDERLAND

Date, First Survey

27 Feb. 17

Last Survey

25 Jan. 1918

Book.

Fitting of Bolinder engine on the motor S.S. RFA "TEAKOL".

(Number of Visits)

34

Gross

1137

Tons

Net

584

When built

1918

when made

1918

when made

when made

Horse Power

Owners

Lords Commissioners Admiralty Port belonging to London

Horse Power as per Section 28

183

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

VES, &c.—Description of Engines

Two cycle, reversible, crude oil

No. of Cylinders

4 each

No. of Cranks

4 each

Cylinders

16 9/16"

16 1/2"

Length of Stroke

18 1/2"

Revs. per minute

160

Dia. of Screw shaft

as per rule

8"

Material of screw shaft

steel

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

propeller boss

yes

If the liner is in more than one length are the joints burned

no

If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

no

If two

are fitted, is the shaft lapped or protected between the liners

no

Length of stern bush

12 1/2" aft 2 1/2"

Tunnel shaft

as per rule

7 1/2"

Dia. of Crank shaft journals

as per rule

7 1/2"

Dia. of Crank pin

7 1/2"

Size of Crank webs

Dia. of thrust shaft under

Dia. of screw

6 1/2"

Pitch of Screw

6 1/2"

No. of Blades

3

State whether moveable

no

Total surface

16 1/2"

Feed pumps

2

Diameter of ditto

3 1/2"

Stroke

2"

Can one be overhauled while the other is at work

yes

Bilge pumps

2

Diameter of ditto

4 3/8"

Stroke

5"

Can one be overhauled while the other is at work

yes

Donkey Engines

2 motor driven

Sizes of Pumps

Ballast

208 1/2"

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

In Holds, &c.

Bilge Injections

yes

Connected to condenser, or to circulating pump

no

Is a separate Donkey Suction fitted in Engine room & size

yes

7"

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

connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

valves

Are the Discharge Pipes above or below the deep water line

on line

fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

yes

How are they protected

no

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

yes

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

yes

Examination of completion of fitting of Sea Connections

16-8-17

of Stern Tubes

16-8-17

Screw shaft and Propeller

28-8-17

Screw Shaft Tunnel watertight

none

Is it fitted with a watertight door

yes

worked from

no

MRS, &c.—(Letter for record)

Manufacturers of Steel

Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

No. of Certificate

Working Pressure

Tested by hydraulic pressure to

Date of test

No. and Description of Safety Valves to

Area of fire grate in each boiler

No. and Description of Safety Valves to

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Stages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Al of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

er at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

fitted with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

IS A DONKEY BOILER FITTED? yes

If so, is a report now forwarded? bookman's Bo

SPARE GEAR. State the articles supplied:— Two sets of coupling bolts. a complete set of piston rings for every cylinder. four cylinder covers. eight fuel pump valves. eight fuel jets. Several spare parts for the auxiliary engines.

The foregoing is a correct description,

John Dickinson & Sons, Limited
Adelphi

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1917 Feb 27 July 4, 21, 25, 26, 29 Aug 3, 10, 14, 16, 17, 22, 28 Sep 4, 6, 14, 17, 18, 26, 28 Oct 9, 29 Nov 12
During erection on board vessel - - Jan 10, 11, 12, 14, 15, 16, 17, 19, 21, 25
Total No. of visits (34)

Is the approved plan of main boiler forwarded herewith -

" " " donkey " " " -

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft 22-8-17 Propeller 21-7
Stern tube 10-8-17 Steam pipes tested Engine and boiler seatings 16-8-17 Engines holding down bolts 28-9-17
Completion of pumping arrangements 21-1-18 Boilers fixed Engines tried under steam 12, 14, 17 & 21-1-18
Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts J. Steel Identification Marks on Do 22-8-17
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 no If so, state name of vessel -

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

The machinery has been fitted in the vessel under special survey and is eligible in my opinion for classification and the record LMC

It is submitted that
this vessel is eligible for
THE RECORD. LMC 1.18.

Oil Engines. 8 Cy. 16 1/2" - 18 1/2" 250 S.A.
J & C.G. Bolinders Co. Ltd. Skm.

The amount of Entry Fee ... £
Special ... £ 29 5 0
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

When applied for,

When received,

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

TUE. 19 FEB. 1918

Lmb 1.18

MACHINERY CERTIFICATE
WRITTEN



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Foundation