

REPORT ON MACHINERY.

No. 80053.

Received at London Office

10 JUL 1917

Date of writing Report

10 JUL 1917

When handed in at Local Office

10 JUL 1917

Port of London

No. in Survey held at

Wivenhoe

Date, First Survey 12th November 1916Last Survey 12th June 1917

Reg. Book.

on the Steel Motor Coaster Lutona

(Number of Visits 12

Gross

Master

Built at Wivenhoe

By whom built

Rennie Forrest Shipbuilding Co. Ltd

Tons

Net

When built

1917

Engines made at

Stockholm

By whom made

J. & C. G. Bolinder's Co. Ltd

when made

1915

Boilers made at

Brake

By whom made

when made

Registered Horse Power

160

Owners

James Pollock Sons & Co. Ltd.

Port belonging to London

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

Bolinder, two stroke cycle, reversible, with air injection

No. of Cylinders

2

No. of Cranks

2

Dia. of Cylinders

420 $\frac{7}{8}$

Length of Stroke

480 $\frac{7}{8}$

Revs. per minute

225

Dia. of Screw shaft

as fitted 6 $\frac{3}{8}$

Material of screw shaft

Steel

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

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

Dia. of Tunnel shaft

as fitted 5 $\frac{1}{2}$

Dia. of Crank shaft journals

as per rule 158 $\frac{7}{8}$

Dia. of Crank pin

174 $\frac{7}{8}$

Size of Crank webs

240 $\frac{7}{8}$

Dia. of thrust shaft under collars

150 $\frac{7}{8}$

Dia. of screw

5-3

Pitch of Screw

4-1

No. of Blades

3

State whether moveable

No

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

one, attached to motor winch

Sizes of Pumps

100 $\frac{7}{8}$ 100 $\frac{7}{8}$

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

In Engine Room

Two 2" dia.

In Holds, &c.

Three 2" dia in hold, one 2 $\frac{1}{2}$ dia in fore peak, one 2 $\frac{1}{2}$ dia in after peak.

No. of Bilge Injections

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

Yes, 2" dia.

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

Yes

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

Yes

Are they Valves or Cocks

Lock

Are they fixed sufficiently high on the ship's side to be seen without lifting the

plates

Yes

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

Yes

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

Yes

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

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

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 each 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

Per centages of strength of longitudinal joint

rivets

plate

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

top

Thickness of plates

crown

Description of longitudinal joint

bottom

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

Date of Test

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IS A DONKEY BOILER FITTED? ☒

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts, 2 connecting rod bottom end bolts & nuts, 6 coupling bolts, 2 sets of valves for bilge pump, 3 bolts & nuts for upper end of cylinder, 1 bolt & nut for bottom end of cylinder, 1 screw for fastening thrust bearing, 1 bolt & nut for eccentric rod, 1 bolt & nut for tilting arm, 1 bolt & nut for regulator weight, 2 bolts for main bearing, 1 set valve for circulating pump.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1915 Nov 12, 16, (1917) Feb. 22, 28 Mar. 18, 29, 30, April 11, May 19, 24, June 12
During erection on board vessel --
Total No. of visits 12

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 8.3.17 Screw shaft 12.11.15 Propeller 12.11.15
Stern tube Steam pipes tested ☒ Engine and boiler seatings 10.5.17 Engines holding down bolts 10.5.17
Completion of pumping arrangements 7.6.17 Boilers fixed ☒ Engines tried under steam 12.6.17
Completion of fitting sea connections 17.3.17 Stern tube 8.3.17 Screw shaft and propeller 13.3.17
Main boiler safety valves adjusted ☒ Thickness of adjusting washers ☒
Material of Crank shaft Steel Identification Mark on Do. ☒ Material of Thrust shaft Steel Identification Mark on Do. ☒
Material of Tunnel shafts Steel Identification Marks on Do. N° 10 288 Material of Screw shafts Steel Identification Marks on Do. N° 10 288
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.)

The Engines were surveyed whilst being fitted into the vessel and found satisfactory, the fuel tanks were tested by hydraulic pressure to 10 lbs per sq. inch and found satisfactory.

The Engines tried under full power and worked smoothly & well, the speed of vessel on trial trip 7.95 Knts. per hour, revolutions full ahead 225 per minute. Astern 225 per min. lowest number of revolutions for manoeuvring 98-102. All the rule requirements for Internal combustion Engines have been carried out, & is now in my opinion eligible for the record of + L.M.C. 6-17 in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 6-17.

Oil Engines 2 Cy. 16½" - 19"

J & C G. Belinders Ltd. Skm. 25C.S.A.

The amount of Entry Fee ... £ 1-0-0

When applied for,

Special ... £ 2-13-4

When received,

Donkey Boiler Fee ... £

Travelling Expenses (if any) £ 12-18-0

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. NOV. 17 1922 FRI. 28 DEC. 1917

FRI. JUL 30 1920

TUE. 9 JUL 1919

FRI. 23 SEP. 1921

FRI. APR 20 1922

FRI. OCT 10 1921