

REPORT ON MACHINERY.

No. 79719

Received at London Office

Date of writing Report 27 FEB 1917

When handed in at Local Office 27 FEB 1917

Port of London

No. in Survey held at Uivenhoe

Date, First Survey 20th Jan 1916 Last Survey 18th Jan 1917

Reg. Book.

on the Motor Coaster "LEE LEE"

(Number of Visits 8)

Gross

Tons

Net

Master

Built at Uivenhoe

By whom built Pennie Louette Shipbuilding Co. Ltd. When built 1914

Engines made at Stockholm

By whom made J. & C. G. Bolinder's Co. Ltd.

when made 1915

Boilers made at ✓

By whom made ✓

when made ✓

Horse Power 120

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's two stroke cycle, reversible. (See Stockholm report N^o 1458)

No. of Cylinders 2

No. of Cranks 2

Dia. of Cylinders 15"

Length of Stroke 16 1/8" Revs. per minute

Dia. of Screw shaft as fitted 5 9/16"

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 ✓

Length of stern bush 1-11 1/2"

Dia. of Tunnel shaft as fitted 5"

as per rule 4.86"

Dia. of Crank shaft journals as fitted 5 1/2"

as per rule 5.5"

Dia. of Crank pin 6 1/2"

Size of Crank webs 8 1/2 x 3 1/2"

Dia. of thrust shaft under

collars ✓

Dia. of screw 4-8"

Pitch of Screw 3-6"

No. of Blades 3

State whether moveable No

Total surface 8 1/2 ft²

No. of Feed pumps ✓

Diameter of ditto ✓

Stroke ✓

Can one be overhauled while the other is at work ✓

No. of Bilge pumps one ✓

Diameter of ditto 4"

Stroke 5"

Can one be overhauled while the other is at work ✓

No. of Donkey Engines attached to bilge ✓

Motor pump

Sizes of Pumps 3 1/2 x 3"

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

In Engine Room Two 2" dia. ✓

In Holds, &c. Three 2" dia. Aft peak 2" dia. ✓

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 ✓

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

Are they Valves or Cocks Cock ✓

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 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 ✓

How are they protected ✓

What pipes are carried through the bunkers ✓

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

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

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

End plates in steam space:

Pitch of stays to ditto: Sides

Back

Top

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

Area at smallest part

Area supported by each stay

Working pressure of plate by rules

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

Girders to Chamber tops: Material

Depth and

Pitch across wide water spaces

Working pressures by rules

Length as per rule

Distance apart

Number and pitch of stays in each

% of strength of joint

Working pressure by rules

Steam dome: description of joint to shell

Diam. of rivet holes

Description of longitudinal joint

Diam. of rivet holes

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

002550-002558-0184

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 helge pump valves, 3 bolts & nuts for upper end of cylinder, 1 bolt & nut for bottom end of cylinder, 1 bolt & nut for the eccentric rod, 1 bolt & nut for tilting arm, 1 bolt & nut for regulator weight, 2 bolts & nuts for main bearing, 1 pressure valve for circulating pump. + ditto for suction pp. + ignition bulb.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1916 Jan 20, Aug 30, Sept 5, Nov 24, Dec 8 (1917) Jan 4, 18 Feb 6
During erection on board vessel - - - 8
Total No. of visits 8

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 ✓ ~~INT~~ shaft 24-11-16 Screw shaft 28-12-17 Propeller 19-12-16
Stern tube ~~D~~ Steam pipes tested ✓ Engine and boiler seatings 8-12-16 Engines holding down bolts 19-12-16
Completion of pumping arrangements 4-1-17 Boilers fixed ✓ Engines tried under working conditions 6-2-17
Completion of fitting sea connections 5-9-16 Stern tube 5-9-16 Screw shaft and propeller 5-9-16
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 ~~INT~~ shaft ~~Steel~~ Identification Marks on Do. 14-5-11 Art. Material of Screw shaft ~~Steel~~ Identification Marks on Do. ~~Ditto~~
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? Yes ✓ If so, state name of vessel S.S. "Gristo" ✓

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

The Engines surveyed whilst being fitted on board the vessel and found satisfactory, the fuel and feed tanks 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 the vessel on trial trip was $7\frac{3}{4}$ Knots per hour, revolutions 250. lowest number of revolutions for manouevring purposes 132. All the rule requirements for internal combustion Engines have been carried out, & is in my opinion eligible for the record of + L.M.C. 2-17 in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 2.17.

Oil Engines 2x15"-16 $\frac{1}{8}$ " 2 S.C.S.A.
J & C.G. Bolinders. Ltd. Skm.

(Annual Survey)
J.W.D.
28/2/17.

A.E. Farminer

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 1 - 0 - 0
Special ~~of 28.0.0~~ ~~of 28.0.0~~ ~~of 28.0.0~~ £ 2 - 13 - 4
Donkey Boiler Fee ... £ 1 - 12 - 8
Travelling Expenses (if any) £ X - X - X

When applied for,

27 FEB 1917

When received,

20-3-17

Committee's Minute

Assigned

FRI 9-MAR. 1917

TUE 14 JAN. 1919

FRI AUG. 13 1919

FRI 31 AUG. 1917

FRI NOV. 23 1917

TUE 22 OCT. 1920

TUE APR. 24 1922

FRI NOV. 19 1918

FRI NOV. 19 1918

FRI NOV. 19 1918

FRI NOV. 19 1918

FRI NOV. 19 1918

FRI NOV. 19 1918

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

+ L.M.C. 2 17
oil engines

WRITTEN

Lloyd's Register
Foundation