

Rpt. 4.

REPORT ON MACHINERY.

No. 39515

Date of writing Report

19

When handed in at Local Office

19

Port of

Glasgow

Received at London Office

TUE. APR 20 1920

No. in Survey held at Glasgow.

Date, First Survey 14th July 1919

Last Survey 1-12-

1919

Reg. Book.

on the Main engines No. 747 for J. Boughlan & Sons Vancouver, B.C.

Master

Built at

By whom built

When built

Engines made at

Glasgow

By whom made

J. Rowan & Co. Ltd. (No 747)

when made

1919

Boilers made at

By whom made

when made

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 27" x 44" x 73"

Length of Stroke 48"

Revs. per minute

Dia. of Screw shaft

as per rule

Material of

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

Is 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

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

as per rule

13.9"

Dia. of Crank pin

14.2"

Size of Crank webs 28" x 49"

Dia. of thrust shaft under

rollers

Dia. of screw

Pitch of Screw

No. of Blades

State whether moveable

Total surface

No. of Feed pumps 2

Diameter of ditto 4"

Stroke 24"

Can one be overhauled while the other is at work

No. of Bilge pumps 2

Diameter of ditto 4"

Stroke 24"

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

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

in Engine Room

In Holds, &c.

No. of Bilge Injections

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

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

Are they Valves or Cocks

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

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

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

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

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

OILERS, &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

Percentages of strength of longitudinal joint

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

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

W734-0087

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 top end bolts and nuts, 2 bottom end bolts and nuts, 2 main bearing bolts and nuts, one set coupling bolts and nuts, set of feed and bridge pump valves, assorted iron bolts and nuts and other articles as required by Specification.

The foregoing is a correct description,

David Rowan & Co. Ltd.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1919 July 14 Aug 22 Sept 16 25 Oct 1 5 17 22 30 Nov 3 5 10 21 27 Dec 1
{ During erection on board vessel --- }
Total No. of visits 15

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 30-10-19 Slides 3-11-19 Covers 30-10-19 Pistons 3-10-19 Rods 3-11-

Connecting rods 10-11-19 Crank shaft 17-10-19 Thrust shaft - Tunnel shafts - Screw shaft - Propeller -

Stern tube - Steam pipes tested - Engine and boiler seatings - Engines holding down bolts -

Completion of pumping arrangements - Boilers fixed - Engines tried under steam -

Completion of fitting sea connections - Stern tube - Screw shaft and propeller -

Main boiler safety valves adjusted - Thickness of adjusting washers 5372.0.7.84616513

Material of Crank shaft Steel Identification Mark on Do. 17-10-19 Material of Thrust shaft - Identification Mark on Do. -

Material of Tunnel shafts - Identification Marks on Do. - Material of Screw shafts - Identification Marks on Do. -

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. These main engines have been constructed under Special Survey in accordance with the Rules and approved plans, materials and workmanship are good.

The Engines from the after end of crankshaft up to the engine stop valve, have been despatched to Messrs. J. Goughan & Sons Vancouver B.C.

The work covered by the Specification has been satisfactorily carried out, with the following exceptions:— (1) The contraflo attachment for the condenser, which is being supplied by the Contraflo Co, has not been fitted to the H.P. piston rod and H.P. valve spindle.

The makers state arrangements are being made for this work to be completed on arrival of the Engines in Canada.

The amount of Entry Fee ... £ : : When applied for, London
Special ... £ 50 40 + } 9/11 1920
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 19

(Signed) Jas Easthope.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. JUN. 4 1920

FRI. JUL. 2 1920

FRI. DEC. 31 1920

FRI. 4 MAR. 1921

Assigned No action

TUE. AUG. 10 1920

TUE. 23 AUG. 1921

TUE. SEP. 7 1920

TUE. SEP. 27 1921

FRI. DEC. 3 1920

Lloyd's Register
Foundation