

REPORT ON MACHINERY.

No. 39514

Received at London Office

WED. 17 JUN 1920

Date of writing Report

19

When handed in at Local Office

3-1-1920

Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

14. 7. 19.

Last Survey

1. 12. 1919.

on the *Manila* Engine No 746 of *Coughlan & Sons* Vancouver B.C.

(Number of Visits)

17

Master

Built at

By whom built

Gross
Tons
Net
When built

Engines made at

Glasgow

By whom made

W. Rowan & Co. Ltd (No 746)

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" 44" 73"

Length of Stroke 48

Revs. per minute —

Dia. of Screw shaft

as per rule —

Material of

screw shaft —

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

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 —

Dia. of Tunnel shaft

as per rule —

Dia. of Crank shaft journals

as per rule —

13.9"

Dia. of Crank pin 14 1/2"

Size of Crank webs 28x9"

Dia. of thrust shaft under

collars —

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 —

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.....
bottom.....

Thickness of plates

crown.....
bottom.....

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

008020-008027-0100

18. 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 and bolts and nuts, 2 main bearing bolts and nuts, 1 set coupling bolts and nuts, set of feed and bilge pump valves, assorted iron bolts and nuts and other articles as required by specification.

The foregoing is a correct description,

David Cowan & Co Ltd per *Alfred Lund* Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1919 July 14 Aug 22 Sept 16-25 Oct 1-2-9-15-22-28-30 Nov 3-5-10-21-27 Dec 1
During erection on board vessel --
Total No. of visits 17.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 3.11.19 Slides 25.9.19 Covers 3.11.19 Pistons 30.10.19 Rods 30.10.19

Connecting rods 10.11.19 Crank shaft 2.10.19 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 —

Material of Crank shaft Steel Identification Mark on Do. A H 962 G L S 2 6 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 after end of crank shaft up to the engine stop valve, have now been despatched to Messrs J. Coughlan & Sons Vancouver B.C.

The work covered by the specification has been satisfactorily carried out, with the exception that the Contraflo attachment for the Condenser, which is being supplied by the Contraflo Co, has not been fitted in place. The makers state that arrangements are being made for this work to be completed on arrival of the engines in Canada.

The amount of Entry Fee ... £ : :
Special ... £ 50: 0 : :
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : : :
When applied for, London 9/11/1920
When received, 1/3/1920

Committee's Minute GLASGOW 6 - JAN 1920

Assigned No action

TUE. APR. 25 1922

TUE. 7 NOV. 1922

FRI. 17 NOV. 1922

TUE. NOV. 30 1920

TUE. JUL. 25 1921

Lloyd's Register Foundation