

REPORT ON MACHINERY

No. 39326

Date of writing Report

19

When handed in at Local Office

7/11/

1919 Port of

Received at London Office

GLASGOW

THU. MAR. 25 1920

in Survey held at

Glasgow

Date, First Survey 17 Sept. 1918 Last Survey 24 October 1919

on the

Main Engines "No 2F" for Goughland & Sons, Vancouver B.C.

(Number of visits 26)

aster

Built at

By whom built

Tons } Gross
Net
When built

Engines made at

Glasgow

By whom made

D & W Anderson & Co. Ltd

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 14.7"

Material of

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

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

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

Length of stern bush —

Dia. of Tunnel shaft

as per rule 13.3"

Dia. of Crank shaft journals

as per rule 13.9"

as fitted 14.2"

Dia. of Crank pin

14.2"

Size of Crank webs 9 x 28"

Dia. of thrust shaft under

llars —

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

mg. 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

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

111335-0096

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Top end bolts & nuts 2 bottom end bolts & nuts 6 coupling bolts & nuts, 2 main bearing bolts & nuts, 1 set of feed and bilge pump valves, Bolts & nuts assorted Iron and other articles as required by Specification.

The foregoing is a correct description,

For David & Wm Henderson & Co Ltd.

Manufacturer. (Sgd) A. Patrick

Director

Dates of Survey while building { During progress of work in shops -- 1918 Sept 17, 20, 23, 24 Oct 1, 8, 9, 14, 29 Nov 20 1919 Jan 9, 29 Mar 17 Apr 8, 30. In June 4 '10
During erection on board vessel -- July 8 Sept 12 Oct 10, 15, 22, 24.
Total No. of visits 26

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 8.4.19 Slides 8.4.19 Covers 8.4.19 Pistons 4.6.19 Rods 4.6.19
Connecting rods 8.7.19 Crank shaft 1.5.19 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. H.C.F.S. 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 crankshaft up to and including triple branch piece on engine stop valve have now been despatched to Messrs Goughlan & Son, Vancouver, B.C.

The work covered by the specification has been satisfactorily carried out and completed, with the following exceptions:—
(1) The cylinders and casings have not been tested by hydraulic pressure.
(2) The "Contraflo" attachment for the condenser, which is being supplied by the Contraflo Co., has not been fitted in place. The makers' arrangements are being made for this work to be completed on arrival of the engines in Canada.

Machinery Construction Fees, See London Sec 7 Letter A Dec 23

The amount of Entry Fee ... £ : :
Special ... £ : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 19
When received, 19

(Sgd) Jas. Casthope
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Glasgow 11 Nov 1919
Assigned No action

FRI. JUN. 4 1920
FRI. DEC. 31 1920
TUE. MAR. 15 1921
TUE. 27 JUN. 1921
FRI. 10 MAR. 1922

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