

Rpt. 4.

## REPORT ON MACHINERY.

No. 1418

Received at London Office

Date of writing Report

Aug. 11.

1919

When handed in at Local Office

Aug. 19.

1919

Port of

Montreal

15. 1919

No. in Survey held at

Montreal.

Date, First Survey

Oct. 24, 1918

Last Survey

Aug. 7.

1919

Reg. Book.

on the S. S. "CANADIAN SEIGNEUR"

(Number of Visits 59)

Gross 5707.  
Net 3554.

Master F. Ferguson

Built at

Montreal

By whom built

Canadian Vickers Ltd.

When built

1919.

Machines made at

Montreal

By whom made

Canadian Vickers Ltd.

when made

1919

Machines made at

"

By whom made

"

"

when made

1919.

Registered Horse Power

266.5

Owners

Canadian Government Merchant Marine Ltd.

Port belonging to

Montreal

Horse Power as per Section 28

520

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes.

GINES, &amp; Co.—Description of Engines

Triple Expansion Surface Condensing.

No. of Cylinders

3

No. of Cranks

3

No. of Cylinders

27" x 44" x 73"

Length of Stroke

48"

Revs. per minute

75

Dia. of Screw shaft

15.5"

Material of

screw shaft

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

Yes

Is the after end of the liner made water tight

the propeller boss

Yes

If the liner is in more than one length are the joints burned

No

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

Yes

If two

shafts are fitted, is the shaft lapped or protected between the liners

Yes

Length of stern bush

5' 6 1/2"

No. of Tunnel shaft

as per rule 13.3"

Dia. of Crank shaft journals

as per rule 13.96"

Dia. of Crank pin

14.5"

Size of Crank webs

52" x 8" x 9"

Dia. of thrust shaft under

bars

14.5"

Dia. of screw

18.0"

Pitch of Screw

15.9"

No. of Blades

4

State whether moveable

Yes

Total surface

98 sq ft

No. of Feed pumps

2

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

4

Sizes of Pumps

No. 1. 5. 9 1/2 x 7 x 8" Ballast 5. 12 x 14 x 24"

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

Engine Room

2 - 3 1/2"

In Holds, &amp;c. Ballast 1-3", 1-4", 1-5", 2-3", 2-4", 3-5", 3-6", 4-5", 4-6", 5-7"

No. of Bilge Injections

1 sizes 9"

Connected to condenser or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room &amp; size

Yes 2-4"

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

Both

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

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

None

How are they protected

Yes

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

Yes

Is it fitted with a watertight door

Yes

worked from

Top E.R. platform

MILERS, &amp; Co.—(Letter for record S.)

Manufacturers of Steel Lukens Steel Co. Pennsylvania.

Total Heating Surface of Boilers

7743

Is Forced Draft fitted

Yes

No. and Description of Boilers

3 Scotch type

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

12-2-19

No. of Certificate

53-54.

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

66.1 sq ft

No. and Description of Safety Valves to

h boiler

2 Spring loaded.

Area of each valve

8.3 sq ft

Pressure to which they are adjusted

180 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

16"

Mean dia. of boilers

15' 6"

Length

11' 6"

Material of shell plates

S.

Thickness

1 3/8"

Range of tensile strength

26-28 Tons.

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams

D.R.

g. seams

D.B.S. TR.

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

9 3/4"

Lap of plates on

width of butt straps

19 7/8"

Percentages of strength of longitudinal joint

rivets 87.4

plate 85.0

Working pressure of shell by rules

183

Size of manhole in shell

16" x 12"

No. of compensating rings

3 7 1/2 x 29 x 1 3/8"

No. and Description of Furnaces in each boiler

3 Brighton.

Material

S.

Outside diameter

4' 2 1/4"

Length of plain part

top

bottom

Thickness of plates

crown 19/32"

bottom 1/2"

Description of longitudinal joint

Weld.

No. of strengthening rings

—

Working pressure of furnace by the rules

187

Combustion chamber plates: Material

S.

Thickness: Sides

5/8"

Back

5/8"

Top

5/8"

Bottom

1 5/16"

Pitch of stays to ditto: Sides

9" x 7 1/2"

Back

8 1/4" x 8"

Top

9" x 7 1/2"

If stays are fitted with nuts or riveted heads

Nuts.

Working pressure by rules

197

Material of stays

S.

Area at smallest part

1.760"

Area supported by each stay

68.60"

Working pressure by rules

230

End plates in steam space:

Material

S.

Thickness

1 1/16"

Pitch of stays

18" x 15"

How are stays secured

Weld.

Working pressure by rules

184

Material of stays

S.

Area at smallest part

5.170"

Area supported by each stay

270.0"

Working pressure by rules

204

Material of Front plates at bottom

S.

Thickness

1 3/16"

Material of Lower back plate

S.

Thickness

3/8"

Greatest pitch of stays

13 1/2" x 18 1/4"

Working pressure of plate by rules

187

Diameter of tubes

3"

Pitch of tubes

44"

Material of tube plates

S.

Thickness: Front

3/4"

Back

3/4"

Mean pitch of stays

8 1/2" x 8 1/2"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

205"

Girders to Chamber tops: Material

S.

Depth and

Thickness of girder at centre

10" x 1 1/2"

Length as per rule

2' 6 7/8"

Distance apart

9"

Number and pitch of stays in each

Working pressure by rules

250

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

—

Test



IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:—

2 connecting rod big end bolts & nuts ✓	1 set Main & Donkey Feed checks	2 bronze propeller blades.
2 " " " " " ✓	6 cylinder over ends & nuts.	1 H.P. piston valve.
2 main bearing " " " ✓	6 steam chest " " "	1 set each H.P. & S.P. piston rings
6. Coupling " " " ✓	12 junk ring " " "	18 ordinary & 6 boiler clay tubes.
1 set of Feed pump valves. ✓	Assorted bolts & nuts ✓	36 condenser tubes & 50 ferrules
1 " " " " " ✓	bars round & flat iron	1 set of fire bars for one boiler

The foregoing is a correct description,

FOR CANADIAN SHIPBUILDERS LIMITED

J. H. Miller

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1918. Oct. 24, 29, 31 Nov. 13, 18, 27, Dec. 9, 16, 1919. Jan. 2, 6, 14, 10, 18, 23, 28, Feb. 3, 5, 6, 7, 12, 11, 12, 17, 25, 28, Mar. 7, 12, 14, 1919. May. 10, 12, 14, 19, 20, 21, 23, 26, 27, 29, 30, 31. July. 17, 18, 21, 22, 26, 31. Aug. 1, 4, 5, 7. }  
During erection on board vessel --  
Total No. of visits 59

Is the approved plan of main boiler forwarded herewith No ✓

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 5-2-19 Slides 28-8-19 Covers 20-2-19 Pistons 21-8-19 Rods 21-3-19  
Connecting rods 10-3-19 Crank shaft 7-2-19 Thrust shaft 3-2-19 Tunnel shafts 17-2-19 Screw shaft 3-4-19 Propeller 3-4-19  
Stern tube 3-4-19 Steam pipes tested 30-5-19 Engine and boiler seatings 6-5-19 Engines holding down bolts 28-5-19  
Completion of pumping arrangements 5-8-19 Boilers fixed 21-5-19 Engines tried under steam 7-8-19  
Completion of fitting sea connections 29-4-19 Stern tube 24-4-19 Screw shaft and propeller 1-5-19  
Main boiler safety valves adjusted 1-8-19 Thickness of adjusting washers P. 1 1/2, 2 1/2, 3 1/2, 4 1/2, 5 1/2, 6 1/2, 7 1/2, 8 1/2, 9 1/2, 10 1/2, 11 1/2, 12 1/2, 13 1/2, 14 1/2, 15 1/2, 16 1/2, 17 1/2, 18 1/2, 19 1/2, 20 1/2, 21 1/2, 22 1/2, 23 1/2, 24 1/2, 25 1/2, 26 1/2, 27 1/2, 28 1/2, 29 1/2, 30 1/2, 31 1/2, 32 1/2, 33 1/2, 34 1/2, 35 1/2, 36 1/2, 37 1/2, 38 1/2, 39 1/2, 40 1/2, 41 1/2, 42 1/2, 43 1/2, 44 1/2, 45 1/2, 46 1/2, 47 1/2, 48 1/2, 49 1/2, 50 1/2, 51 1/2, 52 1/2, 53 1/2, 54 1/2, 55 1/2, 56 1/2, 57 1/2, 58 1/2, 59 1/2, 60 1/2, 61 1/2, 62 1/2, 63 1/2, 64 1/2, 65 1/2, 66 1/2, 67 1/2, 68 1/2, 69 1/2, 70 1/2, 71 1/2, 72 1/2, 73 1/2, 74 1/2, 75 1/2, 76 1/2, 77 1/2, 78 1/2, 79 1/2, 80 1/2, 81 1/2, 82 1/2, 83 1/2, 84 1/2, 85 1/2, 86 1/2, 87 1/2, 88 1/2, 89 1/2, 90 1/2, 91 1/2, 92 1/2, 93 1/2, 94 1/2, 95 1/2, 96 1/2, 97 1/2, 98 1/2, 99 1/2, 100 1/2, 101 1/2, 102 1/2, 103 1/2, 104 1/2, 105 1/2, 106 1/2, 107 1/2, 108 1/2, 109 1/2, 110 1/2, 111 1/2, 112 1/2, 113 1/2, 114 1/2, 115 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