

Rpt. 4.

REPORT ON MACHINERY.

APR 20 1920

REC'D NEW YORK Mar 29 1920

Received at London Office

FILE APR 20 1920

Date of writing Report

March 22 1920

When handed in at Local Office

March 22 1920

Port of

Vancouver, B.C.

No. in Survey held at

Vancouver, B.C.

Date, First Survey

Sept. 27/19

Last Survey

March 22 1920

Reg. Book.

on the Single Screw S.S. "Canadian Exporter"

(Number of Visits)

26

Visits

Gross 549823

Net 3384.61

Master

W. Bradley

Built at

Vancouver, B.C.

By whom built

Glasgow Shipyard

When built

1920

Engines made at

Glasgow

By whom made

D. Rowan & Co. Ltd.

when made

1919

Boilers made at

Vancouver, B.C.

By whom made

Vulcan Iron Works Ltd.

when made

1920

Indicated

Horse Power 3000

Owners

Canadian Government

Port belonging to

Montreal

Nom. Horse Power as per Section 28

520

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

24", 44", 73"

Length of Stroke

48"

Revs. per minute

83

Dia. of Screw shaft

as per rule 14.7

as fitted 15.3

Material of

Steel

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

Yes. 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

5'-2"

Dia. of Tunnel shaft

as per rule 13.19

as fitted 13.3

Dia. of Crank shaft journals

as per rule 13.99

as fitted 13.93

Dia. of Crank pin

14.2"

Size of Crank webs

9x28"

Dia. of thrust shaft under

collars

collars

14.2"

Dia. of screw

17.6"

Pitch of Screw

18" 0"

No. of Blades

4

State whether moveable

Yes

Total surface

95 sq

No. of Feed pumps

3

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

3

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

None

Sizes of Pumps

10.5x14x18"

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

In Engine Room

20.5x3.5"

In Hold, &c.

20.5x3.5"

No. 1, 2, 3. Holds,

10.5x4"

in Hold Well,

10.5x3"

in Tunnel Well

14 in all.

No. of Bilge Injections

1

Size

9"

Connected to condenser, or to circulating pump

Pump

Is a separate Donkey Suction fitted in Engine room & size

Yes

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

Valves & Cocks

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

Below

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

Bilge Pipes

How are they protected

Wood Covering

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

Engine Room

35.3

BOILERS, &c.—(Letter for record)

B.

Manufacturers of Steel

Illinois Steel Co. Ltd.

35.3

Total Heating Surface of Boilers

4439

Is Forced Draft fitted

Yes

No. and Description of Boilers

30

Scott Marine

35.3

Working Pressure

180 lb

Tested by hydraulic pressure to

300 lb

Date of test

Dec. 23/19

No. of Certificate

29

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

66.12 sq

No. and Description of Safety Valves to

each boiler

20

Scott Marine

Area of each valve

9.62 sq

Pressure to which they are adjusted

180 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

78"

Mean dia. of boilers

15.73"

Length

11.6"

Material of shell plates

Steel

Thickness

1.3/8"

Range of tensile strength

60,000 lb

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Double Riveted

long. seams

Double Riveted

Diameter of rivet holes in long. seams

7/8"

Pitch of rivets

9.3/16"

Gap of plates or width of butt straps

19.7/8"

Per centages of strength of longitudinal joint

rivets 87.4

plate 85

Working pressure of shell by rules

188.4

Size of manhole in shell

16"x12"

Size of compensating ring

3.5x3.5x1.3/4"

No. and Description of Furnaces in each boiler

30

Morison

Material

Steel

Outside diameter

50.4"

Length of plain part

top 19.32

bottom 19.32

Thickness of plates

crown 19.32

bottom 19.32

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

78.8

Combustion chamber plates: Material

Steel

Thickness: Sides

7/8"

Back

7/8"

Top

7/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

7.2"

Back

8"

Top

9"

If stays are fitted with nuts or riveted heads

Yatted

Working pressure by rules

196

Material of stays

Steel

Area at smallest part

10.73"

Area supported by each stay

30"

Working pressure by rules

240"

End plates in steam space:

Material

Steel

Thickness

7/16"

Pitch of stays

15.7/8"

Area at smallest part

5.938"

Area supported by each stay

135"

Working pressure by rules

202"

Material of Front plates at bottom

Steel

Thickness

13/16"

Material of Lower back plate

Steel

Thickness

13/16"

Greatest pitch of stays

24"x10.2"

Working pressure of plate by rules

199"

Diameter of tubes

3"

Pitch of tubes

4.4"

Material of tube plates

Steel

Thickness: Front

13/16"

Back

3/4"

Mean pitch of stays

8"

Pitch across wide water spaces

13.5"

Working pressures by rules

78.3.3

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

10.3/4"

Length as per rule

2.9"

Distance apart

9"

Number and pitch of stays in each

30 7.2"

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

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

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

✓

SPARE GEAR.

State the articles supplied:

Two Connecting Rods, Top & Bottom End Bolts & Nuts, Two Main Bearing Bolt-nuts, Six of Coupling Bolt-nuts, one for each of Feed and Bilge Pump Valves, Three Main and Three Donkey Feed Check Valves, 24 Bolt-nuts Assorted, 6 Cylinders, and 6 Steam Chest Cover Stud-nuts, 12 Shank Ring Stud-nuts, Quantities of Iron of Various Sizes, 2 Propeller Blades, one H.P. Piston Valve, Condenser Tubes & Ferrules, Boiler Tubes, White metal Rivets, Etc. Etc.

The foregoing is a correct description,

J. COUGHLIN & SONS

John Coughlin

Manufacturer.

Dates of Survey while building { During progress of work in shops - - Sept. 2, 11, Oct. 1, 2, 6, 14 Nov. 11, 27, Dec. 2, 5, 10, 12, 14, 15, 16, 18, 19, 23, Dec. 26, 1919, Jan. 5, 28, Feb. 2, 10, 13, 19, March 22, 1920
During erection on board vessel - - -
Total No. of visits 26 Visits

Is the approved plan of main boiler forwarded herewith Copy

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 25/2/20 Slides 25/2/20 Covers 25/2/20 Pistons 25/2/20 Rods 25/2/20
Connecting rods 25/2/20 Crank shaft 25/2/20 Thrust shaft 5/1/20 Tunnel shafts 28/1/20 Screw shaft 23/12/19 Propeller 19/12/19
Stern tube 11/11/19 Steam pipes tested 19/2/20 Engine and boiler seatings 2/2/20 Engines holding down bolts 2/2/20
Completion of pumping arrangements 10/2/20 Boilers fixed 2/2/20 Engines tried under steam 23/2/20
Completion of fitting sea connections 26/12/19 Stern tube 26/12/19 Screw shaft and propeller 10/2/20
Main boiler safety valves adjusted 25/2/20 Thickness of adjusting washers Port 15/32 Star 3/8 Centre 15/32 Port 15/32 Star 3/8 Centre 15/32
Material of Crank shaft Steel Identification Mark on Do. Material of Thrust shaft Steel Identification Mark on Do.
Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do.
Material of Steam Pipes Steel Test pressure 540 lb. □

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

"Canadian Importer"

General Remarks

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

The Engineer & Boilers of this

Vessel have been built under Special Survey and installed under Special Survey, and in accordance with approved plans, together with the Auxiliaries, Pumps, Piping Mountings & Fittings and Sea Connections Etc. The material and Workmanship are both of Good Quality on completion of the Machinery installation. The vessel was tried under full Steam at Sea and found Satisfactory.

Please refer to Glasgow Report: No 39515;

Tail Shaft is a continuous Lirer.

Safety Valves were floated independently

Contra Flow for Condenser to be fitted in Montreal.

The Machinery and Boilers are eligible in my opinion to have the Record L.M.C.S. 20. made in the Register Book in the case of this Vessel.

The amount of Entry Fee ... £ 15 : 00 :

When applied for,

Special ... £ 153 : 00 :

Mar. 22, 1920

Machinery Construction fees, see London

Donkey Boiler Fee ... £ :

When received,

See Letter A Dec. 23, 1919

Travelling Expenses (if any) £ :

Committee's Minute

Assigned

FRI. JUN. 4 1920

L.M.C.S. 3. 20 To B.

FRI. DEC. 3 1920

FRI. JUL. 2 1920

TUE. AUG. 10 1920

TUE. SEP. 7 1920

FRI. DEC. 31 1920

FRI. DEC. 31 1920

FRI. DEC. 31 1920

FRI. DEC. 31 1920

FRI. DEC. 31 1920

FRI. DEC. 31 1920

FRI. DEC. 31 1920