

REPORT ON MACHINERY

No. 782.

Date of writing Report *Feb 12 1920* When handed in at Local Office *Feb 12 1920* Port of *Vancouver, B.C.*
 in Survey held at *Vancouver, B.C.* Date, First Survey *Sept 5 1910* Last Survey *Feb 9 1920*
 on the *Single Screw Steel S.S. Canadian Importer* (Number of Visits *3*)
 Master *A. O. Cooper* Built at *Vancouver, B.C.* By whom built *Coughlan Smith & Co.* Tons Gross *5465.40* Net *3403.74*
 Engines made at *Glasgow.* By whom made *Br. W. Henderson & Co.* when made *1919*
 Makers made at *Vancouver, B.C.* By whom made *Vulcan Iron Works Ltd.* when made *1919*
 Indicated Horse Power *3000* Owners *Canadian Government - Port belonging to Montreal*
 n. Hors. Power as per Section 28 *520* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes.*

GINES, &c. — Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*

No. of Cylinders *24* Length of Stroke *48"* Revs. per minute *83* Dia. of Screw shaft as per rule *14 1/2"* Material of *Steel*
 as fitted *15 1/2"* screw shaft

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 *Length 6'* 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

ers are fitted, is the shaft lapped or protected between the liners *Yes.* Length of stern bush *5'-2"*

a. of Tunnel shaft as per rule *13 1/2"* Dia. of Crank shaft journals as per rule *13 1/2"* Dia. of Crank pin *14 1/2"* Size of Crank webs *9x28"* Dia. of thrust shaft under

lars *14 1/2"* Dia. of screw *14 1/2"* Pitch of Screw *18.0"* No. of Blades *4* State whether movable *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 *One.* Sizes of Pumps *10 1/2" x 14" x 18"* No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *20" 3 1/2"* *20" 4"* *20" 3 1/2"* *20" 3 1/2"* In Holds, &c. *20" 3 1/2"* in *1, 2, 3. Holds,*

of Bilge Injections *1* Sizes *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.*

That 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.*

MILERS, &c. — (Letter for record *S.* Manufacturers of Steel *Illinois Steel Co. Ltd.*

Total Heating Surface of Boilers *7743* Is Forced Draft fitted *Yes.* No. and Description of Boilers *30" Scotch Marine*

Working Pressure *180 lb.* Tested by hydraulic pressure to *300 lb.* Date of test *Nov 24/19* No. of Certificate *24*

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" 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 *18"* Mean dia. of boilers *15 7/8"* 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 Lap*

g. seams *Double Riveted Lap* Diameter of rivet holes in long. seams *13/8"* Pitch of rivets *9 3/16"* Lap of plates or width of butt straps *19 7/8"*

Percentages of strength of longitudinal joint rivets *87.4* Working pressure of shell by rules *184.4* Size of manhole in shell *16" x 12"*

Size of compensating ring *37 1/2" x 33 1/2" x 1 3/8"* No. and Description of Furnaces in each boiler *30" Brighton* Material *Steel* Outside diameter *50 1/4"*

Length of plain part top *19 1/2"* Thickness of plates crown *1 3/8"* Description of longitudinal joint *Yes* No. of strengthening rings *—*

Working pressure of furnace by the rules *188.* Combustion chamber plates: Material *Steel* Thickness: Sides *5/8"* Back *3/4"* Top *5/8"* Bottom *15/16"*

Pitch of stays to ditto: Sides *7 1/2"* Back *8"* Top *9"* If stays are fitted with nuts or riveted heads *Vulcan* Working pressure by rules *196.*

Material of stays *Steel* Area at smallest part *2.073* Area supported by each stay *30"* Working pressure by rules *240"* End plates in steam space:

Material *Steel* Thickness *1 1/2"* Pitch of stays *15 x 18* How are stays secured *Double nuts.* Working pressure by rules *202* Material of stays *Steel*

Area at smallest part *5.936* Area supported by each stay *135.0"* Working pressure by rules *202* Material of Front plates at bottom *Steel*

Thickness *1 1/2"* Material of Lower back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *24 x 10 1/2"* Working pressure of plate by rules *199*

Diameter of tubes *3"* Pitch of tubes *4 1/2"* Material of tube plates *Steel* Thickness: Front *1 1/2"* Back *3/4"* Mean pitch of stays *8"*

Pitch across wide water spaces *13 1/2"* Working pressures by rules *183.3.* Girders to Chamber tops: Material *Steel* Depth and

thickness of girder at centre *10 1/2"* Length as per rule *3.9"* Distance apart *9"* Number and pitch of stays in each *30" 2 1/2"*

Working pressure by rules *250* Steam dome: description of joint to shell *Yes* % 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 *—*

101335-0094

If so, is a report now forwarded?

The foregoing is a correct description.

J. G. GUTHRIE & SONS LIMITED

John Coughear

Manufacturer.

Is the approved plan of main boiler forwarded herewith

Test pressure 540 lb. ✓

Is the flash point of the oil to be used over 150°F.

2

If so, state name of vessel

The Ensign & Boatswain

Cylinders & Cappings examined after trial Run found in or
Contra Flow for Condenser to be fitted in Montreal Vacuum on Trial 26 $\frac{1}{2}$
The Machinery & Boilers are eligible in my opinion to
have the Record. F. L. M. C. 2-20 made in the Register Book
the Case of this Vessel,

When applied for,

Feb. 13, 1920

When received.

151 4/20

FRI. JUN. 4 1920

+ d. MC 2:20 Th. L

FRI. DEC. 31 1920

TUE. MAR. 15 1921

TUE. * 7 JUN. 1921

FEL. TOMAR 1922