

Rpt. 4.

REC'D NEW YORK MAY 23 1921
REPORT ON MACHINERY.

No. 1896

FRI. 10 JUN. 1921

Date of writing Report May 18 1921 When handed in at Local Office May 21 1921 Port of MontrealNo. in Survey held at Montreal
Reg. Book.Date, First Survey Apr. 5. 1920Last Survey May 16. 1921(Number of Visits 50)on the S.S. "CANADIAN LEADER"Master J. P. HuxtonBuilt at MontrealBy whom built Canadian Packers Ltd.Gross 5492Tons Net 3342When built 1921Engines made at MontrealBy whom made Canadian Packers Ltd.when made 1921Boilers made at "By whom made "when made 1921Registered Horse Power 266.5Owners Canadian Govt. Merchant MarinePort belonging to MontrealNom. Horse Power as per Section 28 520Is Refrigerating Machinery fitted for cargo purposes YesIs Electric Light fitted Yes**ENGINES, &c.**—Description of Engines Triple Expansion Simple CondensingNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 27"-44"-73"Length of Stroke 48"Revs. per minute 75Dia. of Screw shaft as per rule 14.67"Material of S.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

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

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

liners are fitted, is the shaft lapped or protected between the liners YesLength of stern bush 5' 0 1/2"Dia. 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"x28"x9" Dia. of thrust shaft undercollars 14.5" Dia. of screw 7' 6"Pitch of Screw 15' 9"No. of Blades 4State whether moveable Yes Total surface 95 sq ftNo. of Feed pumps 2Diameter of ditto 8"Stroke 10 1/2"Can one be overhauled while the other is at work YesNo. of Bilge pumps 2Diameter of ditto 4"Stroke 24"Can one be overhauled while the other is at work YesNo. of Donkey Engines 3Sizes of Pumps GEN. SERVICE 11"x7 1/2"x10" CIRC 12"BALLAST 10 1/2"x4"x24"

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

In Engine Room 2-3 1/2"In Holds, &c. BALLAST 1-3" No. 1. 2-3 1/2" No. 2. 2-3 1/4" No. 3. 2-3 1/4" No. 4. 2-3 1/2"No. of Bilge Injections 1sizes 9"Connected to condenser or to circulating pump YesIs a separate Donkey Suction fitted in Engine room & size 2-4"Are all the bilge suction pipes fitted with roses YesAre the roses in Engine room always accessible YesAre the sluices on Engine room bulkheads always accessible YesAre all connections with the sea direct on the skin of the ship YesAre they Valves or Cocks BothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YesAre the Discharge Pipes above or below the deep water line aboveAre they each fitted with a Discharge Valve always accessible on the plating of the vessel YesAre the Blow Off Cocks fitted with a spigot and brass covering plate YesWhat pipes are carried through the bunkers NoneHow are they protected YesAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesIs the Screw Shaft Tunnel watertight YesIs it fitted with a watertight door Yesworked from E.R. by platform**BOILERS, &c.**—(Letter for record S.) Manufacturers of Steel Worth Steel Co.Total Heating Surface of Boilers 7810Is Forced Draft fitted YesNo. and Description of Boilers 3 Scotch typeWorking Pressure 180 lbsTested by hydraulic pressure to 360 lbsDate of test 25-11-20No. of Certificate 49Can each boiler be worked separately YesArea of fire grate in each boiler 66-12 sq ft

No. and Description of Safety Valves to

each boiler 2 Spring loadedArea of each valve 8.3 sq inPressure to which they are adjusted 184Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 14"Mean dia. of boilers 15' 6"Length 11' 6" Material of shell plates S.Thickness 1 3/8"Range of tensile strength 28-32 TONSAre the shell plates welded or flanged No.Descrip. of riveting: cir. seams DR.long. seams DBS TR.Diameter of rivet holes in long. seams 1 3/8"Pitch of rivets 9 3/16"Lap of plates or width of butt straps 19 7/8"Per centages of strength of longitudinal joint 87.4rivets 85.0Working pressure of shell by rules 183Size of manhole in shell 16"x12"Size of compensating ring 3 1/2"x33"x1 3/8"No. and Description of Furnaces in each boiler 3 Dighton.Material S.Outside diameter 4' 2 1/4"Length of plain part topbottom YesThickness of plates 19 3/32"crown 19 3/32"Description of longitudinal joint Weld.No. of strengthening rings —Working pressure of furnace by the rules 187 lbsCombustion chamber plates: Material S.Thickness: Sides 5/8"Back 5/8"Top 5/8"Bottom 15/16"Pitch of stays to ditto: Sides 9"x7 1/2"Back 8 1/2"x8"Top 9"x7 1/2"If stays are fitted with nuts or riveted heads NotWorking pressure by rules 197 lbsMaterial of stays S.Area at smallest part 1.76 sq inArea supported by each stay 68.6 sq inWorking pressure by rules 242 lbs End plates in steam space:Material S.Thickness 1/8"Pitch of stays 18"x16"How are stays secured Welded to shellWorking pressure by rules 195 lbs Material of stays S.Area at smallest part 6.27 sq inArea supported by each stay 290 sq inWorking pressure by rules 190Material of Front plates at bottom S.Thickness 13/16"Material of Lower back plate S.Thickness 1 3/16"Greatest pitch of stays 13 1/2"x8 1/4"Working pressure of plate by rules 182.5Diameter of tubes 3"Pitch of tubes 4 1/4"Material of tube plates S.Thickness: Front 1 3/16"Back 3/4"Mean pitch of stays 8 1/2"x8 1/2"Pitch across wide water spaces 13 1/2"Working pressures by rules 249Girders to Chamber tops: Material S.

Depth and

thickness of girder at centre 10"x1 1/2"Length as per rule 2' 6 7/8"Distance apart 9"Number and pitch of stays in each 3-7 1/2"Working pressure by rules 203 lbsSteam 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 —

009493-009504-0329

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

2 connecting rod top end bolts & nuts	1 set of main & donkey feed checks	2 donkey propeller blades
2 " " bottom " " "	6 cyl cone studs & nuts	1 H. P. piston valve.
2 main bearing " " "	6 stem chest " " "	1 set H.P. - I.P. & L.P. piston rings
6 coupling " " "	12 crank ring " " "	Ordinary & 6 day links for boilers
1 set of feed pump valves	Washed bolts & nuts	12 condenser tubes & 50 screws
1 " " " " "	" bars of round & flat iron	1 set of fire bars for one boiler.

The foregoing is a correct description,

FOR CANADIAN MARINERS LIMITED
M. J. Miller

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1920 Apr. 5-19, May 5, Jun. 22, July-Aug. 30, Sept. 3, 10-29, Oct. 11-14, 15, Nov. 15, 18, 16, 17, 18, 22, 25, 29, 30, Dec. 3, 6, 8.
During erection on board vessel -- 1921 Jan. 7, 12, 17, 24, 31, Feb. 4, 15, 25, Mar. 8, 21, 28, 30, Apr. 1, 5, 11, 13, 16, 22, 28, 29, May, 1, 2, 3, 16.
Total No. of visits 50.

Is the approved plan of main boiler forwarded herewith *No*

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders 29-10-20 Slides 8-3-21 Covers 29-10-20 Pistons 23-11-20 Rods 23-11-20
Connecting rods 16-11-20 Crank shaft 16-11-20 Thrust shaft 16-11-20 Tunnel shafts 16-11-20 Screw shaft 13-10-20 Propeller 13-10-20
Stern tube 16-11-20 Steam pipes tested 8-3-21 Engine and boiler seatings 25-11-20 Engines holding down bolts 17-1-21
Completion of pumping arrangements 3-5-21 Boilers fixed 6-2-20 Engines tried under steam 3-5-21
Completion of fitting sea connections 25-11-20 Stern tube 19-11-20 Screw shaft and propeller 22-11-20
Main boiler safety valves adjusted 2-5-20 Thickness of adjusting washers P. 496" S. 350" P. 418" S. 448" P. 450" S. 514"
Material of Crank shaft S Identification Mark on Do. O.T.J. Material of Thrust shaft S Identification Mark on Do. O.T.J.
Material of Tunnel shafts S Identification Marks on Do. O.T.J. Material of Screw shaft S Identification Marks on Do. O.T.J.
Material of Steam Pipes Steel Test pressure 540 lbs per sq in.

Is an installation fitted for burning oil fuel *No.*

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 Pioneer, Can. Ranger, Can. Despatch, Can. India, Can. Firmer, Can. Planter, Can. Conqueror, Can. Victor, Can. Commander.*

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

The Machinery of this vessel has been constructed under special survey and in accordance with the rules and the approved plans. The workmanship and materials are good. It has been fitted on board and tried out under full working conditions with satisfactory results.

The Boilers are of good workmanship and the materials have been tested according to rule. They have been tested by water pressure to 360 lbs and the safety valves have been adjusted under steam to blow at 184 lbs per sq in.

In my opinion the machinery of this vessel is in good and efficient condition and is eligible to be classed in the Society's Register Book with the record of F.L.M.C. 5-21.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 5-21. F.D. C.L.

Reck

17/6/21

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The amount of Entry Fee ... £ 30.00
Special ... £ 505.00
Donkey Boiler Fee ... £ 40.00
Travelling Expenses (if any) £ 31.85

When applied for,
May 12 1921

When received,
2/6/21

Committee's Minute

FRI. 17 JUN. 1921

Assigned

+ L.M.C. 5-21

F.D. C.L.

H. J. Alderson
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation