

Received at London Office

Date of writing Report 11-7-19 19 When handed in at Local Office

Port of Port Arthur Ontario

No. in Survey held at Port Arthur Ontario

Date, First Survey Dec. 23-1918 Last Survey Aug. 5-1919 19

Reg. Book.

(Number of Visits)

on the Steel S. S. Steamer "Canadian Sailer" Bulkfreighter

Gross 2264

Net 1341.73

Master Capt. Larmour

Built at Port Arthur Ont. By whom built Port Arthur Shipbuilding Co.

When built 1919

Engines made at Port Arthur Ontario By whom made Port Arthur Shipbuilding Co.

when made 1919

Boilers made at Port Arthur Ontario By whom made Port Arthur Shipbuilding Co.

when made 1919

Registered Horse Power 1283

Owners Canadian Government

Port belonging to Montreal Que.

Nom. Horse Power as per Section 28 264 265

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion

No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 20 1/2 x 34 1/2 56" Length of Stroke 40" Revs. per minute 88 Dia. of Screw shaft as per rule 11.96 Material of Steel 0. M

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 Brazed 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 Fit If two

liners are fitted, is the shaft lapped or protected between the liners Lapped and brazed Length of stern bush 3' 10 1/2"

Dia. of Tunnel shaft as per rule 10.69 Dia. of Crank shaft journals as per rule 11.375 22 Dia. of Crank pin 11.5 Size of Crank webs 7 1/2" x 22 Dia. of thrust shaft under

collars 12" Dia. of screw 14.75 Pitch of Screw 14.5 No. of Blades 4 State whether moveable No Total surface 70.8

No. of Feed pumps Three Diameter of ditto 9 1/2" Stroke 15" Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two Diameter of ditto 3 1/2" Stroke 20" Can one be overhauled while the other is at work Yes

No. of Donkey Engines One Sizes of Pumps 7 1/2" x 9" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 3" In Holds, &c. Bilges 1 to 6, one 3" each, Forepeak one

2 1/2", Afterpeak one 2 1/2", Tunnel well one 2 1/2", Ballast tanks 1 to 6, 19 2 1/2" suction. No. of Bilge Injections One 6" Connected to circulating 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

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 Above

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

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 None return valves

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Main deck in Engine room

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel Lukens Coatsville Pa. U.S.A.

Total Heating Surface of Boilers 4626 Is Forced Draft fitted No No. and Description of Boilers Two Scotch Marine Type.

Working Pressure 190 Lbs. Tested by hydraulic pressure to 285 Lbs. Date of test June 1919 No. of Certificate #18

Can each boiler be worked separately Yes Area of fire grate in each boiler 63 Sq. feet No. and Description of Safety Valves to

each boiler Two Morrison Type Area of each valve 14.1 sq. pressure to which they are adjusted 190 Lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15' 0" Length 11' 0" Material of shell plates steel

Thickness 1 1/2" Range of tensile strength 28 to 32 Tons the shell plates welded or flanged No Descrip. of riveting: cir. seams 17/16 rivets

D.B.S.T. Riveted long. seams 5 rivets pitch Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" & 5" Lap of plates or width of butt straps 21" x 1 1/2"

Per centages of strength of longitudinal joint rivets 87.526% Working pressure of shell by rules 217.93 Size of manhole in shell 12" x 16"

Size of compensating ring 2' 9" x 2' 9" x 1 1/2" No. and Description of Furnaces in each boiler Three Morrison Material steel Outside diameter 49.8125

Length of plain part top 8.8125 Thickness of plates crown .625 Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 218.4 Combustion chamber plates: Material steel Thickness: Sides .625 Back .625 Top .5625 Bottom .625

Pitch of stays to ditto: Sides 6.875 Back 6.875 Top 7 x 7.5 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 211 Lbs.

Material of stays steel Area at smallest part 1.26 Area supported by each stay 45.285 Working pressure by rules 206 End plates in steam space:

Material steel Thickness 1.2181 Pitch of stays 15" & 16" How are stays secured 47 screwed in plate Working pressure by rules 206.4 Material of stays steel

Area at smallest part 4.909 Area supported by each stay 247.5 Working pressure by rules 206 Material of Front plates at bottom steel

Thickness .8125 Material of Lower back plate steel Thickness .6875 Greatest pitch of stays 6.895 x 13.5 Working pressure of plate by rules 194.4

Diameter of tubes 3.25 Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front .7812 Back .7812 Mean pitch of stays 11"

Pitch across wide water spaces 13.75 Working pressures by rules 194.4 Lbs. Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 8.625 x 1.5 Length as per rule 30" Distance apart 7 1/2" Number and pitch of stays in each Three 7 1/2" x 7 1/2"

Working pressure by rules 220

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 red top end belts and nuts, two connecting red bottom end bolts and nuts, two main bearing belts, one set of feed and bilge pump valves, One set of piston springs, one quantity of assorted bolts, nuts, and iron of various sizes, two gauge glasses for main boilers, one set of air pump valves, four patent stays for main boiler, 25 condenser pipe tubes, twelve boiler tubes, one half set of grate bars, and spare propeller.

The foregoing is a correct description,

Port Arthur Shipbuilding Co. Limited.

General Manager

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } Dec. 18-20-26-31, Jan. 2-8-13-20-24-29, Feb. 3-10-19-24-28, March, 5-17-24, April, 9-17, 23-25, May, 7-9-12-14-16-19-21-23-26, June, 2-4-5-7-11-15-18-30, July, 3-14-18-28-29, 31, August, 2-4-5.
(48)
Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders April-19 Slides April-19 Covers April-19 Pistons April-19 Rods April-19

Connecting rods March-19 Crank shaft March-19 Thrust shaft March-19 Tunnel shafts March-19 Screw shaft March-19 Propeller May-19

Stern tube May-19 Steam pipes tested July -19 Engine and boiler seatings May-19 Engines holding down bolts May-19

Completion of pumping arrangements July-19 Boilers fixed June-19 Engines tried under steam July, 25th, 19

Completion of fitting sea connections May -19 Stern tube May/19 Screw shaft and propeller May-19

Main boiler safety valves adjusted August, 1-19 Thickness of adjusting washers 15/16

Material of Crank shaft O.H.S. Identification Mark on Do. 1346786, 954, 811, 848, 1481 969, W.V.S. 1918

Material of Tunnel shafts O.H.S. Identification Marks on Do. 859, 687, 1266, 1296, W.V.S. Material of Thrust shaft O.H.S. Identification Mark on Do. 873, W.V.S. 1918

Material of Steam Pipes steel Test pressure 570 Lbs.

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 Trader"

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

These Engines and Boilers have been built under special survey according to the rules and approved plans. The workmanship and materials are of good quality. The Engines were given a six hour dock trial July the 25th, and six hours full speed trial on Lake Superior July 31st, when everything worked to the satisfaction of all concerned. The ship has now been accepted by the owners and sailed for Montreal.

The Engines and Boilers are eligible in my opinion to receive the notation of

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C 8.19

The amount of Entry Fee ... \$15 : 00 :
Special ... \$165. : 75 :
Travelling Expenses (if any) \$ 38 : 52 :
When applied for, 10-7-1919
When received, 12-7-1919

Committee's Minute TUE 16 SEP 1919

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.

FRI OCT 8 1920

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Foundation