

Rpt. 4.

REPORT ON MACHINERY.

No. 866

Received at London Office

MON 23 MAY 1921

Date of writing Report 21 April 1921 When handed in at Local Office

19 Port of Vancouver BC

No. in Survey held at Victoria BC Date, First Survey 18 July 1920 Last Survey 18 April 1921
Reg. Book. on the Steamer "CANADIAN TRAVELLER" (Number of Visits 36)Master E.S. Wilson Built at Victoria BC By whom built Harbour Marine L^{td} When built 1921Engines made at Toronto By whom made The John Inglis Co. L^{td} when made 1920Boilers made at Victoria BC By whom made The Victoria Machinery Co. L^{td} when made 1920

Registered Horse Power 3000 Owners Canadian Government Port belonging to

Nom. Horse Power as per Section 28 521 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Inserted Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27.44.73 Length of Stroke 48 Revs. per minute 83 Dia. of Screw shaft as per rule 14.63 Material of screw shaft OHS

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

If the liner is in more than one length are the joints burned one length 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 Length of stern bush 5.2"

Dia. of Tunnel shaft as per rule 13.3 Dia. of Crank shaft journals as per rule 13.97 Dia. of Crank pin 14.5 Size of Crank webs 9 x 28 Dia. of thrust shaft under

collars 14.5 Dia. of screw 17.6 Pitch of Screw 15.9 No. of Blades 4 State whether moceable yes Total surface 95.5

No. of Feed pumps 3 { Diameter of ditto Stroke 24 Can one be overhauled while the other is at work yes

No. of Bilge pumps 3 { Diameter of ditto 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 24 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 10 1/2 x 4" in hold 14 1/2" in Tunnel 14 1/2" in Holds, &c. 14 in all

No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump yes 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 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 bilge pipes How are they protected Wood covers

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 Eng platform at Upper D^{rs}

BOILERS, &c.—(Letter for record 3.05) Manufacturers of Steel Carnegie Steel 6" & Illinois Steel 6" 3513

Total Heating Surface of Boilers 7743 Is Forced Draft fitted yes No. and Description of Boilers 36 Horizontal Multitubular

Working Pressure 180 Tested by hydraulic pressure to 360 lb Date of test 27-11-20 No. of Certificate 140

Can each boiler be worked separately yes Area of fire grate in each boiler 66.12 No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 9.62 Pressure to which they are adjusted 180 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15.6" Length 11.6" Material of shell plates OHS

Thickness 1.375 Range of tensile strength 28 to 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

Long. seams Triple Diameter of rivet holes in long. seams 1.375 Pitch of rivets 9.187 Lap of plates or width of butt straps 20"

Per centages of strength of longitudinal joint rivets 87.4 Working pressure of shell by rules 200 Size of manhole in shell 12 x 16

Size of compensating ring 37.5 x 33 No. and Description of Furnaces in each boiler 3 Longitudinal Material OHS Outside diameter 50.25

Length of plain part top 1.375 Thickness of plates crown 1.375 Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules 187 Combustion chamber plates: Material OHS Thickness: Sides 3/8 Back 5/8 Top 5/8 Bottom 15/16

Pitch of stays to ditto: Sides 7.5 x 9 Back 8 x 8.25 Top 9 x 7.5 If stays are fitted with nuts or riveted heads both Working pressure by rules 200

Material of stays OHS Area at smallest part 1.76 Area supported by each stay 66" Working pressure by rules 210 End plates in steam space:

Material OHS Thickness 1.76 Pitch of stays 18 x 15 How are stays secured 2 nuts Working pressure by rules 185 Material of stays OHS

Area at smallest part 5.27 Area supported by each stay 270 Working pressure by rules 202 Material of Front plates at bottom OHS

Thickness 13/16 Material of Lower back plate OHS Thickness 13/16 Greatest pitch of stays 12 Working pressure of plate by rules 200

Diameter of tubes 3 Pitch of tubes 4.25 Material of tube plates OHS Thickness: Front 13/16 Back 3/4 Mean pitch of stays 8.5 x 12.5

Pitch across wide water spaces 13.5 Working pressures by rules 180 Girders to Chamber tops: Material OHS Depth and

Thickness of girder at centre 10.15 Length as per rule 30.5 Distance apart 9.5 Number and pitch of stays in each 3, 7.5

Working pressure by rules 230 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 Rod top & bottom end bolts & nuts, Two main bearing bolts & nuts, six coupling bolts & nuts. One set of feed and one set of bilge pump valves. Three main & three donkey feed check valves. Six cylinder and six steam chest cover studs & nuts. Twelve pump ring studs & nuts. Two propeller blades. One H.P. Piston Valve. Condenser tubes & ferrules. Boiler tubes, white metal, Annular. A assorted bolts & nuts, round & flat iron & rivets.*

The foregoing is a correct description,

Allen Craig per *C. W. D.* Manufacturer.

Dates of Survey while building *July 18, Aug 16, 18, Sept 2, 9, 16, 20, 22, 29, Nov 4, 11, 15, 24, 29, Oct 15*
During erection on board vessel *Nov 4, 11, 15, 24, 27, Dec 7, 16, 18, 24, 29, 1921, Jan 5, 10, Feb 1, 5, 11, 14, Mar 18, 19, 30, Apr 8, 11*
Total No. of visits *36*

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *HR 14-2-21* Slides *1-2-21* Covers *1-2-21* Pistons *1-2-21* Rods *1-2-21*

Connecting rods *7-8-20* Crank shaft *23-8-20* Thrust shaft *23-8-20* Tunnel shafts *20-7-20* Screw shaft *20-7-20* Propeller *22-9-20*

Stern tube *16-9-20* Steam pipes tested *1-2-21* Engine and boiler seatings *5-1-21* Engines holding down bolts *5-1-21*

Completion of pumping arrangements *18-3-21* Boilers fixed *5-2-21* Engines tried under steam *8th April 21*

Completion of fitting sea connections *28-9-20* Stern tube *28-9-20* Screw shaft and propeller *28-9-20*

Main boiler safety valves adjusted *18 March 1921* Thickness of adjusting washers *PORT B. CENTRE B. STAR B.*

Material of Crank shaft *OHS* Identification Mark on Do. *15-8-6* Material of Thrust shaft *OHS* Identification Mark on Do. *10-8-19*

Material of Tunnel shafts *OHS* Identification Marks on Do. *1601/1602/1603/1604/1605* Material of Screw shafts *OHS* Identification Marks on Do. *1606/1607/1608*

Material of Steam Pipes *OHS* Test pressure *540^{lb}*

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 *SS Canadian Winner*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines and boilers of the vessel*

have been built under special survey and installed under special survey in

accordance with the approved plans together with the auxiliaries, pumps, piping

mountings & sea connections. The material & workmanship are of good quality.

On the completion of the machinery installation the vessel was tried under full

steam at sea & found satisfactory.

Please refer to Toronto report N° 165 on survey of machinery at makers, also

Toronto report N° 150 on survey of three main boilers before time of re-rating.

The tail shaft is fitted with a continuous liner.

The safety valves have been floated independently and set at 180^{lb} & "

The machinery & boilers are a duplicate of machinery & boilers fitted

in SS "Canadian Winner" sister ship. Vancouver Report N° 841.

The machinery & boilers are eligible in my opinion to have record

+ LMC 4-21 made in the Register Book in the case of the vessel.

A copy of approved Boiler Plan is enclosed herewith.

The amount of Entry Fee ... *\$15.00* When applied for, *4 May 1921*

Special ... *\$260.50* When received, *25-5-22*

Donkey Boiler Fee ... *£*

Travelling Expenses (if any) *\$123.50*

Committee's Minute *TUE. MAY. 31 1921*

Assigned *+ LMC 4-21*

20, CL

ENGINEER SURVEYOR TO LLOYD'S REGISTER OF SHIPPING.

C. Nasie & Fran Edwards

TUE. NOV. 7 1921

LLOYD'S REGISTER FOUNDATION