

Rpt. 4.

REC'D NEW YORK APR 20 1921

REPORT ON MACHINERY.

No. 863

Date of writing Report 8 April 1921 When handed in at Local Office 4 April 1921 Port of Vancouver B.C.
No. in Survey held at Vancouver B.C. Date, First Survey 22nd July 1920 Last Survey 7th April 1921
Reg. Book. on the Single Screw Steamer "CANADIAN SKIRMISHER"
Master W. Wallace Built at North Vancouver By whom built Wallace & D.D. Co. Ltd.
Engines made at North Vancouver By whom made Wallace & D.D. Co. Ltd. when made 1921
Boilers made at Vancouver By whom made Vulcan Iron Works when made 1921
Registered Horse Power 3000 Owners Canadian Government Port belonging to Montreal
Nom. Horse Power as per Section 28 521 540 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Inverted 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 14.7 as per rule 14.63 Material of 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
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 yes Length of stern bush 5'2"
Dia. of Tunnel shaft 13.3 as per rule 13.97 Dia. of Crank shaft journals 14.5 as fitted 14.5 Dia. of Crank pin 14.5 Size of Crank webs 9x18 Dia. of thrust shaft under
collars 14.5 Dia. of screw 17.6 Pitch of Screw 18-0 No. of Blades 4 State whether moveable yes Total surface 95.8
No. of Feed pumps 3 { 2 Diameter of ditto 10 1/2 x 18 Stroke 21 Can one be overhauled while the other is at work yes
No. of Bilge pumps 3 { 2 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 24 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 1 off 3", 2 off 4", 2 off 3 1/2" in B Room In Holds, &c. 2 off 3 1/2" in N^o 1, 2, and 3 Holds
1 off 4" in Hold well + one 5" in tunnel well, 1 1/4 in all.
No. of Bilge Injections 1 sizes 8 Connected to condenser to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes, 4"
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 no
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 Engine Room at Upper D^o

BOILERS, &c.—(Letter for record 3 S.B.) Manufacturers of Steel Lubbershall & Co.
Total Heating Surface of Boilers 8199 Is Forced Draft fitted yes No. and Description of Boilers 3 Cylindrical Multitubular
Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 27th Jan 1921 No. of Certificate 42
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 24" Mean dia. of boilers 15'6" Length 11'6" Material of shell plates OHS
Thickness 1 3/8" Range of tensile strength 28 to 32,600 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
long. seams True Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 3/16" Lap of plates or width of butt straps 20"
Per centages of strength of longitudinal joint 87.4 rivets 85 plate Working pressure of shell by rules 200 Size of manhole in shell 16 x 12
Size of compensating ring 37.5 x 33 No. and Description of Furnaces in each boiler 3 Corrugated Material OHS Outside diameter 50.25
Length of plain part top Thickness of plates crown 19/32 Description of longitudinal joint — No. of strengthening rings —
Working pressure of furnace by the rules 187 Combustion chamber plates: Material OHS Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 19/16"
Pitch of stays to ditto: Sides 7 1/2 x 9 Back 8.8 1/4 Top 7 1/2 x 9 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 1/16" Pitch of stays 18 x 15 How are stays secured 2 m.c. 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 1/4" Material of tube plates OHS Thickness: Front 13/16" Back 3/4" Mean pitch of stays 8.5 x 12.75
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 x 1 1/2 Length as per rule 33 Distance apart 9 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 —

003200-003207-0172

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.

The main & three donkey feed chest valves. Six cylinder and six steam chest cover studs & nuts. Twelve joint ring studs and nuts. Two propeller blades. One H.P. piston valve. Condenser tubes & pencils, boiler tubes, white metal. Assorted bolts & nuts, rivets & round and flat iron.

The foregoing is a correct description,

Wallace Shipbuilding & Dry Dock Co. Ltd.

Wallace

Manufacturer.

Dates of Survey while building { During progress of work in shops -- *1920 July 22, Sept 20, Oct 7, 21, 26, 28, Nov 2, 8, 13, 16, 17, 27, Dec 6, 14, 20, 23*
During erection on board vessel -- *1921 Jan 3, 6, 11, 12, 17, 19, 25, 27, 28, Feb 3, 7, 16, 24, March 7*
Total No. of visits *37* April 2, 7.

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *28 Jan 1921* Slides *28-1-21* Covers *28-1-21* Pistons *28-1-21* Rods *19-1-21*

Connecting rods *19-1-21* Crank shaft *19-1-21* Thrust shaft *20-12-20* Tunnel shafts *16-3-21* Screw shaft *20-12-20* Propeller *16-3-21*

Stern tube *28-1-21* Steam pipes tested *16-3-21* Engine and boiler seatings *24-2-21* Engines holding down bolts *7-3-21*

Completion of pumping arrangements *31-3-21* Boilers fixed *21-3-21* Engines tried under steam *2-4-21*

Completion of fitting sea connections *16-3-21* Stern tube *7-2-21* Screw shaft and propeller *16-3-21*

Main boiler safety valves adjusted *2-4-21* Thickness of adjusting washers { PORT B. *P 17 S 35* CENTRE B. *P 42 S 34* STEP B. *P 27 S 13*

Material of Crank shaft *OHS* Identification Mark on Do. *29-3-21* Material of Thrust shaft *OHS* Identification Mark on Do. *CH 1-6-21*

Material of Tunnel shafts *OHS* Identification Marks on Do. *CH 1-6-21* Material of Screw shafts *OHS* Identification Marks on Do. *CH 1-6-21*

Material of Steam Pipes *OHS* Identification Marks on Do. *CH 1-6-21* Test pressure *540 lb sq in*

Is an installation fitted for burning oil fuel *yes*

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

Have the requirements of Section 49 of the Rules been complied with *yes*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *SS "Canadian Highlander"*

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

The engines and boilers of this vessel have been built and installed under special survey in accordance with the approved plans, together with the auxiliaries, piping, pumps, mountings & connections. The material and workmanship are of good quality.

On completion of the machinery installation the vessel was tried under full steam at sea and found satisfactory.

The safety valves have been floated independently and set at 180 lb sq in.

The machinery & boilers are eligible in my opinion to have record + LMC 4-21 made in the Register Book in the case of this vessel.

Refrigerating Machinery is now being fitted for cargo purposes in way of No 3 Tween Deck, a report will be forwarded on completion.

The amount of Entry Fee ... *\$ 15.00.*

Special ... *\$ 505.25*

Donkey Boiler Fee ... *£*

Travelling Expenses (if any) *£*

When applied for, *15 April 1921*

When received, *21.6.21*

C. A. H. & Co. Ltd.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 20 MAY. 1921

Assigned

*+ LMC 4.21 2D. C.L.
Fitted for oil fuel 4.21 2P. above 150°F.*

MACHINERY DEPT.
WRITTEN



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Foundation