

REPORT ON MACHINERY.

REC'D NEW YORK July 8-1918

Received at London Office

Date of writing Report June 28 1918 When handed in at Local Office

July 3 1918 Port of Montreal

No. in Survey held at Montreal

Date, First Survey Jan. 9. 1917

Last Survey June 25 1918

Reg. Book. on the S.S. "PORSANGER"

(Number of Visits 93)

Gross 4363
Net 2577
When built 1918

Master R. M. Dickinson. Built at Montreal

By whom built Canadian Vickers Ltd

Engines made at Montreal

By whom made Canadian Vickers Ltd.

when made 1918

Boilers made at Montreal

By whom made Canadian Vickers Ltd.

when made 1918

Registered Horse Power 220

Owners Westfall Larau

Port belonging to Montreal.

Net Horse Power as per Section 28 333 Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

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

a. of Cylinders 25"-41"-67 Length of Stroke 45" Revs. per minute 70 Dia. of Screw shaft as per rule 13.95 Material of screw shaft S.

the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 No If the liner does not fit tightly at the part

tween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

ners are fitted, is the shaft lapped or protected between the liners Liners nearly lapped space filled with copper lining Length of stern bush 4' 9"

Dia. of Tunnel shaft as per rule 12.4" Dia. of Crank shaft journals as per rule 13.13" Dia. of Crank pin 13.25" Size of Crank webs 8 1/2" x 24 1/2" Dia. of thrust shaft under

rollers 13.25" Dia. of screw 14' 0" Pitch of Screw 14' 0" No. of Blades 4 State whether moveable No Total surface 88 sq

No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 7 General Service 1 Bilge 1 Sizes of Pumps 7 1/2" x 6" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps

in Engine Room 1-4" 1-4" 1-6" 1-4" In Holds, &c. 7-Pk. 1-3" No. 1 Hold 1-3 1/2"-2.3" No. 2 Hold 1-4" 2-3"

No. 3 Hold 1-4" 2-3" No. 4 Hold 1-4" 6 hold mill A. Pk. -1.3"

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 1-6"

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 None

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves.

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 Yes

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform in Eng. Room.

OILERS, &c.—(Letter for record S.) Manufacturers of Steel Shell plates Carnegie S. Co. Flanging Plates Illinois Steel Co.

Total Heating Surface of Boilers 5200 sq Is Forced Draft fitted No No. and Description of Boilers 2 Multitubular Scotch Type.

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 8-3-18 No. of Certificate No. 1

Can each boiler be worked separately Yes Area of fire grate in each boiler 69 sq No. and Description of Safety Valves to

each boiler 2 Spring Loaded Area of each valve 8.29 sq Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 13" Mean dia. of boilers 16' 0" Length 11' 3" Material of shell plates Steel.

Thickness 1 5/16" Range of tensile strength 28-32 Tons Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams Double

long. seams Double Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 1' 1/2"

Per centages of strength of longitudinal joint rivets 84% Working pressure of shell by rules 185 lbs Size of manhole in shell 16" x 12"

plate 85% Size of compensating ring 29" x 3 1/2" No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 4' 2 1/2"

Length of plain part top Thickness of plates crown 9 3/32" Description of longitudinal joint Weld No. of strengthening rings

bottom Thickness of plates bottom 9 3/32" Working pressure of furnace by the rules 189 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 1 1/16"

Pitch of stays to ditto: Sides 7 1/2" x 9" Back 8" x 8 1/4" Top 7 1/2" x 9" If stays are fitted with nuts or riveted heads 4 Nuts Working pressure by rules 195 lbs

Material of stays Steel Area at smallest part 1.76 sq Area supported by each stay 67.5 sq Working pressure by rules 208 End plates in steam space:

Material Steel Thickness 1 1/8" Pitch of stays 16" x 14" How are stays secured Double nuts Working pressure by rules 195 lbs Material of stays Steel.

Area at smallest part 5.268 sq Area supported by each stay 288 sq Working pressure by rules 190 Material of Front plates at bottom Steel

Thickness 3/16" Material of Lower back plate Steel Thickness 1 3/16" Greatest pitch of stays 13 1/2" x 8 1/2" Working pressure of plate by rules 185

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 3/16" Back 3/4" Mean pitch of stays 9 1/2" x 9 1/2"

Pitch across wide water spaces 14 1/2" Working pressures by rules 223 BACK Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 10" x 3 1/2" Angle Length as per rule 2' 8" Distance apart 9" Number and pitch of stays in each 3-4 1/2"

Working pressure by rules 228 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

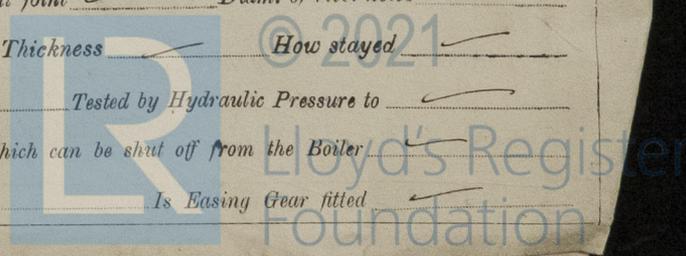
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

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

009341-009349-0315



IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:— 1 Screw shaft. One section of crank shaft, one set of safety valve apparatus
1 spare propeller 6 gauge glass & masters 3 boiler stop tubes, 2 plates 3/4" x 8"
2 connecting rod bolts & nuts top end 100 assorted bolts & nuts for engine 12 plain tubes 6 bars assorted iron
2 " " " " bottom end 100 " " " " " " 24 condenser tubes 1 set of fire bars
2 main bearing bolts & nuts 1 set of boiler check valves 50 forules 1 set of piston rings
1 set of coupling bolts. 6 eye cover bolts 3 valve stoppers
1 set of feed & tilge pump valves & seats. 4 valve chest bolts 6 piston bolts & nuts.

The foregoing is a correct description,

FOR CANADIAN VESSELS LIMITED

M. Miller

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1917. Jan. 19, 26, 31, Feb. 7, 16, 20, 23, Mar. 13, 19, 28, April 2, 7, 12, 18, 25, May 5, 15, 26, 28, June 2, 15, 19, 28, July 4, 13, 19, Aug. 1, 10, 15, 28, Sep. 15, 20, 26, 30, Oct. 7, 10, 14, 16, 19, 22, 27, Dec. 3, 7, 13, 31/19 18 Jan. 2, 7, 11, 15, 18, 21, 26, 30, Feb. 1, 4, 7, 13, 15, 21, 25, 27, Mar. 1, 5, 8, 13, 19, 26, Apr. 1, 4, 8, 11, 15, 18, 21, 24, 27, 30, May 3, 12, 14, 15, 20, 22, 23, 25, 29, 30 June 1, 2, 5, 6, 9, 10, 12, 25.
During erection on board vessel - - -
Total No. of visits 93.

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

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders 2-11-17 Slides Covers 4-1-18 Pistons 15-2-18 Rods 15-2-18
Connecting rods 4-2-18 Crank shaft 23-1-18 Thrust shaft 26-1-18 Tunnel shafts 15-2-18 Screw shaft 2-11-17 Propeller 21-11-17
Stern tube 23-11-17 Steam pipes tested 1-6-18 Engine and boiler seatings 25-4-18 Engines holding down bolts 22-5-18
Completion of pumping arrangements 2-6-18 Boilers fixed 22-5-18 Engines tried under steam 2-6-18
Completion of fitting sea connections 25-11-17 Stern tube 26-11-17 Screw shaft and propeller 28-11-17
Main boiler safety valves adjusted 2-6-18 Thickness of adjusting washers *Port Boiler P. 1/2" S. 1/2" Starboard Boiler P. 1/2" S. 3/4" B.*

Material of Crank shaft *Steel* Identification Mark on Do. *J.L.G.C. 21-3-17* Material of Thrust shaft *J.L.G.C. 21-3-17* Identification Mark on Do. *Steel*
Material of Tunnel shafts *Steel* Identification Marks on Do. *J.L.G.C. 8-3-17* Material of Screw shafts *Steel* Identification Marks on Do. *J.L.G.C. 11-2-17*
Material of Steam Pipes *Steel* Test pressure *540 lbs* (Spare Tail shaft *1-2-17*)

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 *No* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boilers of this vessel have been constructed under special survey and the materials & workmanship are good. The engines and boilers have been efficiently fitted on board and have been tried under steam together with all the auxiliary machinery and have been found to be working satisfactorily. The safety valves have been adjusted under steam to blow at 180 lbs press and the thickness of the washers noted.*

The boilers are of good workmanship and the material has been tested in accordance with the rules. They were tested in a water pressure of 360 lbs per sq. in. and were found tight.

In my opinion the Machinery of this vessel is now in good and efficient condition eligible to be classed in the Register Book and to have the notation \pm L.M.C. 6-1 Subject to the Screw Shaft being specially examined every two years.

It is submitted that this vessel is eligible for THE RECORD. \pm L.M.C. 6-1
SUBJECT TO THE SCREW SHAFT BEING SPECIALLY EXAMINED EVERY TWO YEARS

The amount of Entry Fee ... £ *15.00*
Special ... £ *183.25*
Donkey Boiler Fee ... £
Travelling Expenses (if any) £ *14.35*

When applied for, *June 12, 1918*

When received, *6/19/18*

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

Committee's Minute

Assigned

FRIG. SEP. 1918
L.M.C. 6-1
Subject.



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Certificate (if required) to be sent to Montreal.