

# REPORT ON MACHINERY.

TUE 5 JAN 1920  
No. 154

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Date of writing Report SEP 29 1919 When rendered in at Local Office OCT. 4 1919 Port of TORONTO

No. in Survey held at TORONTO Date, First Survey MCH. 18. 1919 Last Survey DEC. 9. 1919

Reg. Book. on the S.S. "CANADIAN SETTLER" (Number of Plates)

Master P. A. Robertson Built at THREE RIVERS. By whom built TIDE WATER SHIPBUILDERS When built 1919

Engines made at GALT. ONT. By whom made GOLDIE & McCULLOCH & LTD when made 1919

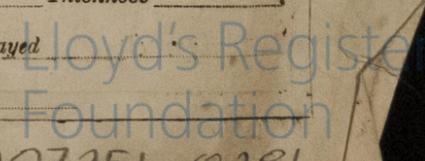
Boilers made at Lachine Que. By whom made Domimon Bridge Co. Ltd. when made 1919

Registered Horse Power 226.5 Owners Canadian Government Port belonging to Montreal

Nom. Horse Power as per Section 28 470 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 25.41-68 Length of Stroke 45 Revs. per minute \_\_\_\_\_ Dia. of Screw shaft as per rule 13.76 Material of screw shaft O.H.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 \_\_\_\_\_ 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 \_\_\_\_\_ 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 12.4 Dia. of Crank shaft journals as per rule 13.03 Dia. of Crank pin 13.25 Size of Crank webs 25.5x8.75 Dia. of thrust shaft under collars 13.25 Dia. of screw 16-6" Pitch of Screw 15-9" No. of Blades 4 State whether moveable no Total surface 84 sq  
 No. of Feed pumps 2 Diameter of ditto 3.5 Stroke 24 Can one be overhauled while the other is at work YES  
 No. of Bilge pumps 2 Diameter of ditto 3.5 Stroke 24 Can one be overhauled while the other is at work YES  
 No. of Donkey Engines 3 Sizes of Pumps 10x14x18" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 4-3" 1-3 1/2" In Holds, &c. Bilge No. 1 1-3 1/2" No. 2 1-4" No. 3 3-4" No. 4 1-3" No. 5 1-3"  
 No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 1-7"  
 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 Yes  
 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 Yes  
 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  
 Dates of examination of completion of fitting of Sea Connections \_\_\_\_\_ of Stern Tube \_\_\_\_\_ Screw shaft and Propeller \_\_\_\_\_  
 Is the Screw Shaft Tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

**BOILERS, &c.**—(Letter for record \_\_\_\_\_) Manufacturers of Steel \_\_\_\_\_  
 Total Heating Surface of Boilers 7275 Is Forced Draft fitted YES No. and Description of Boilers 3 Cylindrical Multitubular  
 Working Pressure 180 Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_  
 Can each boiler be worked separately \_\_\_\_\_ Area of fire grate in each boiler \_\_\_\_\_ No. and Description of Safety Valves to each boiler \_\_\_\_\_  
 Area of each valve \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_  
 Smallest distance between boilers or uptakes and bunkers or woodwork \_\_\_\_\_ Mean dia. of boilers \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_  
 Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Are the shell plates welded or flanged \_\_\_\_\_ Descrip. of riveting: cir. seams \_\_\_\_\_  
 long. seams \_\_\_\_\_ Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plates or width of butt straps \_\_\_\_\_  
 Per centages of strength of longitudinal joint \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Size of manhole in shell \_\_\_\_\_  
 Size of compensating ring \_\_\_\_\_ No. and Description of Furnaces in each boiler \_\_\_\_\_ Material \_\_\_\_\_ Outside diameter \_\_\_\_\_  
 Length of plain part \_\_\_\_\_ Thickness of plates \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ No. of strengthening rings \_\_\_\_\_  
 Working pressure of furnace by the rules \_\_\_\_\_ Combustion chamber plates: Material \_\_\_\_\_ Thickness: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Bottom \_\_\_\_\_  
 Pitch of stays to ditto: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ If stays are fitted with nuts or riveted heads \_\_\_\_\_ Working pressure by rules \_\_\_\_\_  
 Material of stays \_\_\_\_\_ Diameter at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates in steam space \_\_\_\_\_  
 Material \_\_\_\_\_ Thickness \_\_\_\_\_ Pitch of stays \_\_\_\_\_ How are stays secured \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of stays \_\_\_\_\_  
 Diameter at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of Front plates at bottom \_\_\_\_\_  
 Thickness \_\_\_\_\_ Material of Lower back plate \_\_\_\_\_ Thickness \_\_\_\_\_ Greatest pitch of stays \_\_\_\_\_ Working pressure of plate by rules \_\_\_\_\_  
 Diameter of tubes \_\_\_\_\_ Pitch of tubes \_\_\_\_\_ Material of tube plates \_\_\_\_\_ Thickness: Front \_\_\_\_\_ Back \_\_\_\_\_ Mean pitch of stays \_\_\_\_\_  
 Pitch across wide water spaces \_\_\_\_\_ Working pressures by rules \_\_\_\_\_ Girders to Chamber tops: Material \_\_\_\_\_ Depth and thickness of girder at centre \_\_\_\_\_ Length as per rule \_\_\_\_\_ Distance apart \_\_\_\_\_ Number and pitch of stays in each \_\_\_\_\_  
 Working pressure by rules \_\_\_\_\_ Superheater or Steam chest; how connected to boiler \_\_\_\_\_ Can the superheater be shut off and the boiler worked separately \_\_\_\_\_  
 Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivets \_\_\_\_\_  
 Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 Stiffened with rings \_\_\_\_\_ Distance between rings \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_  
 Working pressure of end plates \_\_\_\_\_ Area of safety valves to superheater \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - 2 CONNECTING ROD TOP END BOLTS & NUTS - 2 CONNECTING ROD BOTTOM END BOLTS & NUTS - 2 MAIN BEARING BOLTS & NUTS - 3 CRANK SHAFT COUPLING BOLTS & NUTS - 3 TUNNEL SHAFT COUPLING BOLTS & NUTS - 1 EACH SUCTION & DISCHARGE VALVE FOR FEED PUMPS. - 1 EACH SUCTION & DISCHARGE VALVE FOR BILGE PUMPS. - SIX GLINDER COVER STUDS & NUTS. - 6 PISTON BOLTS & NUTS - 6 STEAM CHEST COVER STUDS & NUTS. - 12 JUNK RING STUDS & NUTS - 1 HP PISTON VALVE. - 25 CONDENSER TUBES. 50 FERRULES. 1 PROPELLER.

The foregoing is a correct description,

A. F. Crauford

Manufacturer.

Dates of Survey while building: During progress of work in shops - MCH 18. 20. APR 10. 18. 22. MAY 2. 22. 30. JUNE 11. 14. JULY 4. 16. AUG 14. 29. SEP 11. 24. 27. During erection on board vessel - APR 20. Oct. 8. 21. Nov 1. 10. 15. 21. 26. 29. 30. Dec 2. 9. Total No. of visits - 29. Is the approved plan of main boiler forwarded herewith No.

Dates of Examination of principal parts - Cylinders 4. 7. 19 Slides 29. 8. 19 Covers 4. 7. 19 Pistons 29. 8. 19 Rods 14. 8. 19 Connecting rods 14. 8. 19 Crank shaft 27. 9. 19 Thrust shaft 29. 8. 19 Tunnel shafts 16. 7. 19 Screw shaft 14. 8. 19 Propeller Stern tube 16. 7. 19 Steam pipes tested 24. 11. 19 Engine and boiler seatings 24. 11. 19 Engines holding down bolts 15. 10. 19 Completion of pumping arrangements 1. 12. 19 Boilers fixed 21. 11. 19 Engines tried under steam 29. 11. 19 Main boiler safety valves adjusted 24. 11. 19 Thickness of adjusting washers S B.R. C. B.R. P. B.R. S 2 3/4 P 2 1/4 S 2 3/4 P 3/2 S 3/2 P 1 3/2 Material of Crank shaft O.H.S. Identification Mark on Do. 1506-27. 9. 19 Material of Thrust shaft O.H.S. Identification Mark on Do. 996-29. 8. Material of Tunnel shafts O.H.S. Identification Marks on Do. 976 to 980 Material of Screw shafts O.H.S. Identification Marks on Do. 984-14. 8. Material of Steam Pipes STEEL & COPPER Test pressure 540 STEEL 360 COPPER

Is an installation fitted for burning oil fuel

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.)

THIS MACHINERY HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY

THE MATERIAL AND WORKMANSHIP ARE GOOD.

IT WILL BE ELIGIBLE FOR RECORD WITH DATE WHEN SURVEY IS COMPLETED

TO COMPLETE MACHINERY TO BE FITTED AND SECURED ON BOARD WITH

AUXILIARIES & CONNECTIONS, ACCORDING TO RULES

These main engines and the necessary auxiliary machinery have been fitted aboard the vessel and tried out under steam at full working conditions with satisfactory results

In my opinion they are eligible to be classed in the Register Book of the Society and to have the record of L.M.C. 12-19.

It is submitted that this vessel is eligible for THE BOARD.

L.M.C. 12-19.F.D.

JAD

9/1/20

ASD

The amount of Entry Fee ... £ : : When applied for, Special \$ 72 : 50 : OCT 3 1919 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ 49 : 20 : 22/1/20

Alexander Scott, R. J. Alderson Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

FRI, JAN. 16. 1920

Assigned

+ L.M.C. 12. 19

MANUSCRIPT CERTIFICATE WRITTEN

FRI. JUL. 2 1920 TUE. SEP. 27 1921

Lloyd's Register Foundation