

Rpt. 4.

REPORT ON MACHINERY.

No. 1930

Date of writing Report Nov 28th 1921 When handed in at Local Office Nov 28th 1921 Port of MontrealNo. in Survey held at Three Rivers P.Q. Date, First Survey Sept. 7. 1920. Last Survey Nov 25th 1921
Reg. Book. on the Single Screw Steamer "Canadian Cruiser" (Number of Visits 57)

Master Sturatt Built at Halifax By whom built Halifax Shipyard Ltd. Gross 177.64 Tons
Engines made at Three Rivers P.Q. By whom made Tidewater Shipbuilders Ltd. when made 1921
Boilers made at Three Rivers P.Q. By whom made Tidewater Shipbuilders Ltd. when made 1921
Registered Horse Power 326 Owners Canadian Government Merchant Marine Co. Port belonging to Halifax N.S.
Nom. Horse Power as per Section 28 705 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion Surface Condensing No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 29 $\frac{1}{2}$ " x 50" x 80" Length of Stroke 54" Revs. per minute 75 Dia. of Screw shaft 16" as per rule 16" as fitted 16 $\frac{1}{4}$ " Material of screw shaft 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 6' 1 $\frac{1}{2}$ "
Dia. of Tunnel shaft 14.8" as per rule 15.0" as fitted 15.5" Dia. of Crank shaft journals 15.5" as per rule 15.5" as fitted 15.5" Dia. of Crank pin 16" Size of Crank webs 4' 9" x 11" Dia. of thrust shaft under
collars 15 $\frac{3}{4}$ " Dia. of screw 19' 0" Pitch of Screw 18'-6" No. of Blades 4 State whether moveable Yes Total surface 110 sq. ft.
No. of Feed pumps 2 Diameter of ditto 9" x 12" Stroke 24" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 7 $\frac{1}{4}$ " Stroke 30" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 4 Sizes of Pumps 1-5 $\frac{1}{2}$ " x 6" 15" 1-8" x 9" 18" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 6 x 3 $\frac{1}{2}$ " 1 x 4" In Holds, &c. 12 x 3 $\frac{1}{2}$ "
No. of Bilge Injections 1 sizes 9" Connected to condenser or to circulating pump 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
Are all connections with the sea direct on the skin of the ship Section No. 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 Main Discharge
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 grating in engine room.

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 10848 sq. ft. Is Forced Draft fitted Yes No. and Description of Boilers 4 Scotch Marine Type.
Working Pressure 180 lbs. 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 rivets 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 top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom 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 Area 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
Area 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 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

W367-0004

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

1 Propeller shaft.	1 stern tube bush.	2 bottom end bolts & nuts.	1 set air pump valves	3 Main & 3 turn stop valves
1 section crank shaft	1 set studs & nuts for 14 rods	3 crank shaft coupling bolts	1 " bidge "	2 safety valve springs
1 eccentric shaft	1 set of piston springs	1 set of thrust shaft "	6 cylinder studs & nuts	24 boiler tubes
1 Abol + 1 Abol screw Rod	1 set of metallic packing	1 pair of top end brasses	8 steam chest "	4 stay tubes
1 slide valve spindle	12 condenser tubes & 50/100 plates	1 " " bottom "	12 plug "	200 fire bars
2 propeller blades	2 connecting rod big end bolts & nuts	2 main bearing "	48 baffle plates.	

The foregoing is a correct description,
TIDEWATER SHIPBUILDERS LIMITED,
THREE RIVERS, QUE.

Donckean

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1920
During erection on board vessel - 1921
Total No. of visits 5-7
Is the approved plan of main boiler forwarded herewith *to*
" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders 24-2-21 Slides 1-8-21 Covers 1-8-21 Pistons 1-8-21 Rods 16-3-21
Connecting rods 16-3-21 Crank shaft 14-2-21 Thrust shaft 14-2-21 Tunnel shafts 4-4-21 Screw shaft 12-4-21 Propeller 3-8-21
Stern tube 14-6-21 Steam pipes tested 19-9-21 Engine and boiler seatings 3-8-21 Engines holding down bolts 6-9-21
Completion of pumping arrangements Oct 21st Boilers fixed 15-8-21 Engines tried under steam 30-9-21
Completion of fitting sea connections 8-7-21 Stern tube 7-7-21 Screw shaft and propeller 3-8-21
Main boiler safety valves adjusted 29-9-21, 30-9-21 Thickness of adjusting washers P.B. 5 11/32, C.B. 5 3/16, S.B. 5 5/32, For B. 5 5/16.
Material of Crank shaft *S.* Identification Mark on Do. *IR* Material of Thrust shaft *S* Identification Mark on Do. *T.S.M.*
Material of Tunnel shafts *S* Identification Marks on Do. *T.S.M.* Material of Screw shafts *S* Identification Marks on Do. *T.S.M.*
Material of Steam Pipes *Steel* Test pressure *540 lbs*
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 *✓* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *These engines have been constructed in the shop under special survey and in accordance with the rules and approved plans. In my opinion they are eligible to be classed after being fitted in the ship to the Halifax surveyors satisfaction.*

The engines and auxiliary machinery have been satisfactorily installed on board and tried under steam both as a coal and oil burner with satisfactory results. The requirements of Section 49 of the Rules for the burning of oil fuel have been complied with, and the machinery is, in my opinion, eligible to receive the record + L.M.C. 11-21, fitted for oil fuel 11-21. F.P. above 150°F

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

+ L.M.C. - 11.21. F.D. C.L.

Fitted for Oil Fuel, 11.21, F.P. above 150°F.

Ind. \$140 for (24/12)

L.J. 2/1/22. G.P.A.

The amount of Entry Fee ... £ *30.00*
Special ... £ *20.00*
Donkey Boiler Fee ... £ *25.00*
Travelling Expenses (if any) £ *92.50*

When applied for, *19.12.21*
When received, *19.12.21*

W. J. Alderson *L. Moon*
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 30 JAN. 1922*
Assigned *+ L.M.C. 11.21 F.D. C.L.*
Fitted for oil fuel 11.21.
F.P. above 150°F.

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