

REC'D NEW YORK DEC 13 1920

Rpt. 4.

## REPORT ON MACHINERY.

No. 1304

Received at London Office MON 3 JAN 1921

Date of writing Report *Dec 8<sup>th</sup> 1920* When handed in at Local Office *Dec 10<sup>th</sup> 1920* Port of *Halifax N.S.*  
 No. in Survey held at *Halifax N.S.* Date, First Survey *Aug 2<sup>nd</sup> 1919* Last Survey *Nov 27<sup>th</sup> 1920*  
 Reg. Book. *53802* on the *Steel Single Deck Canadian Mariner* (Number of Visits *42*)  
 Master *J. D. McKenzie* Built at *Halifax N.S.* By whom built *Halifax Shippers. Ltd.* Tons { Gross *5354.30*  
 Engines made at *Amherst N.S.* By whom made *Robt Engine Works Ltd* when made *1920* Net *3311.36*  
 Boilers made at *Toronto* By whom made *Canadian Allis Chalmers* when made *1920*  
 Registered Horse Power *Owners Canadian Government Merchant Marine* Port belonging to *Halifax N.S.*  
 Nom. Horse Power as per Section 28 *555* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

## ENGINES, &amp;c.—Description of Engines

*Triple Expansion Marine* No. of Cylinders *Three* No. of Cranks *Three*  
 Dia. of Cylinders *27"-44"-73"* Length of Stroke *48* Revs. per minute *80* Dia. of Screw shaft *15 1/2"* Material of screw shaft *Forged Steel*  
 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 *Red lead* If two  
 liners are fitted, is the shaft lapped or protected between the liners *protected* Length of stern bush *8'-0 1/2"*  
 Dia. of Tunnel shaft *14 1/2"* as per rule *13 3/32* Dia. of Crank shaft journals *14 1/2"* as per rule *14* Dia. of Crank pin *14 1/2"* Size of Crank webs *2'-4" x 9"* Dia. of thrust shaft under  
 collars *14 1/2"* Dia. of screw *17'-9"* Pitch of Screw *16'-6"* No. of Blades *4* State whether moveable *No* Total surface *95 sq. ft.*  
 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 *3* Sizes of Pumps *2 Hain's 9 1/2" 7.18* No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room *7-3 1/2"* In Holds, &c. *8-3 1/2"*  
*Tunnel well 1-3 1/2"*

No. of Bilge Injections *1* sizes *8"* Connected to condenser, or to circulating pump *Is a separate Donkey Suction fitted in Engine room & size *yes, 3 1/2"**  
 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 *down on skin* 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 *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 *forward bilge pipes through X bunker* How are they protected *Linber boards*  
 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*

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

Total Heating Surface of Boilers *8565* Is Forced Draft fitted *yes* No. and Description of Boilers *3 S B*  
 Working Pressure *180* Tested by hydraulic pressure to *yes* Date of test *yes* 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 *plate* 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*  
 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

If not, state whether and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

2m. 38. T

© 2021  
 Lloyd's Register  
 Foundation  
 W1309-0021



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 1 propeller, 1 tail end shaft (not put on board)

2 connecting rod top end bolts + nuts, 6 cylinder cover studs + nuts, 24 condenser tubes

2 " " bottom " " " 6 steam chest " " " 1 set metallic packing

2 main bearing bolts, 16 junk ring studs + nuts, 1 valve spindle

1 set coupling bolts, 1 H.P. piston valve, 1 feed pump ram

1 set feed + bilge pump valves, 1 pr top end braces, 1 quadrant block

1 set piston springs, 1 set air pump valves, Quantity of assorted bolts + nuts  
18 boiler tubes, 1 set check valves, Iron of various sizes.

The foregoing is a correct description,

ROBB ENGINEERING WORKS LIMITED

Per -

A. G. Robb Chief Engineer.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1919 Aug 2, 22, Sept 13, 17, 19, Oct 7, Nov 25, Dec 6, 23, 1920 Feb 7, 14, 27, May 14.  
During erection on board vessel - - - Aug 20, 24, Sept 2, 9, 10, 14, 16, 20, 21, 22, 27, 29, 30, Oct 1, 6, 11, 19, 20, 22, 26, 27, 29, Nov 3, 4, 5, 9, 12, 16, 20  
Total No. of visits 42

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders Aug 22/19, Sept 13/19, Oct 7/19, Nov 25/19, Dec 6/19, 23/19, 1920 Feb 7/20, May 14/20  
Connecting rods Nov 25/19, Dec 23/19, Crank shaft Feb 7/20, Thrust shaft Sept 19/19, Tunnel shafts Dec 6/19, Screw shaft Feb 7/20, Propeller May 14/20

Stern tube May 14/20, Steam pipes tested Oct 27/20, Engine and boiler seatings Sept 10, Oct 22, Nov 15, Engines holding down bolts Nov 8 & 15/20

Completion of pumping arrangements Nov 16/20, Boilers fixed Oct 22/20, Engines tried under steam Nov 9 & 22/20

Completion of fitting sea connections Sept 1/20, Stern tube Sept 2/20, Screw shaft and propeller Sept 2 & 3/20

Main boiler safety valves adjusted Nov 20/20, Thickness of adjusting washers Star boiler 5 9/16, Centre boiler 5 13/16, Port boiler 5 1/4

Material of Crank shaft forged steel Identification Mark on Do. O.T.D. Material of Thrust shaft forged steel Identification Mark on Do. O.T.D.

Material of Tunnel shafts forged steel Identification Marks on Do. O.T.D. Material of Screw shafts forged steel Identification Marks on Do. O.T.D.

Material of Steam Pipes Steel Test pressure 540 lbs

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 If so, state name of vessel

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

These engines have been constructed under special survey in accordance with the Rules. The materials are good and workmanship satisfactory. The engines and auxiliary machinery have been satisfactorily fitted on board and tried under steam with satisfactory results and, in our opinion, they are eligible to receive the record LMC 11-20

It is submitted that this vessel is eligible for THE RECORD, + LMC. 11.20 FD.

R. M.

5/1/21.

ARRK

The amount of Entry Fee ... £ \$ : 30.00  
Special ... £ : 433.10  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ : 110.00

When applied for,

Dec 9<sup>th</sup> 1920

When received,

19/21

L. Moon + L. Moon for O. F. Jones

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI. 11 FEB. 1921

L. M. 11.20

CERTIFICATE WRITTEN



© 2021

Lloyd's Register Foundation