

REPORT ON MACHINERY.

No. 751

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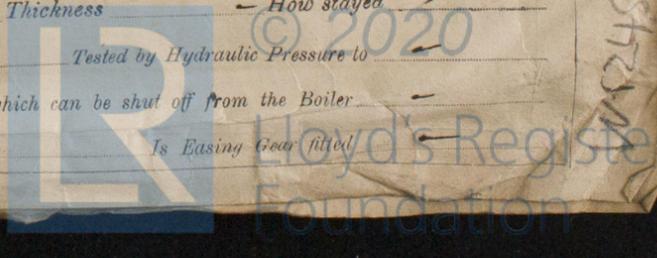
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of writing Report *Aug. 8th 1919* When handed in at Local Office *Aug. 8th 1919* Port of *Vancouver, B.C.*
 in Survey held at *Vancouver, B.C.* Date, First Survey *Dec. 18/18*, Last Survey *August 4th 1919*
 on the *Single Screw Steel S.S. Canadian Trooper*, (Number of Visits *43*) Gross *3179.84*
 Master *R.P.S. Fisher* Built at *Yokh. Vancouver, B.C.* By whom built *Wallace Shipyard & L^d* When built *1919*
 Engines made at *Yokh. Vancouver, B.C.* By whom made *Wallace Shipyard & L^d* when made *1919*
 Boilers made at *Vancouver, B.C.* By whom made *Vulcan Iron Works* when made *1919*
 Rated Horse Power *1800* Owners *Canadian Government* Department *Marine* Port belonging to *Montreal*
 Is Refrigerating Machinery fitted for cargo purposes *Yes* Is Electric Light fitted *Yes*

GINES, &c.—Description of Engines *Triple Expansion Marine* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *15"-41"-64"* Length of Stroke *45"* Revs. per minute *70* Dia. of Screw shaft *13.35* Material of screw shaft *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
 Is 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
 shafts are fitted, is the shaft lapped or protected between the liners *Yes* Length of stern bush *4'-9"*
 Dia. of Tunnel shaft *11.85* Dia. of Crank shaft journals *12.42* Dia. of Crank pin *13.02* Size of Crank webs *8 3/4 x 24 1/2* Dia. of thrust shaft under
 dia. of screw *13 1/4* Dia. of screw *16.3* Pitch of Screw *17'-6"* No. of Blades *4* State whether moveable *Yes* Total surface *83.28*
 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 *1-7 1/2 x 9 x 10 Duplex* No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room *2 of 3" 110 of 3 1/2"* In Holds, &c. *No 1 Hold 2 of 3" No 2 Hold 2 of 3"*
 No. of Bilge Injections *1* sizes *6"* Connected to condenser, or to circulating pump *Yes* 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 *Yes*
 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 *Below*
 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*
 How are they protected *None*
 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 *Main Deck Level*

MANUFACTURERS, &c.—(Letter for record *S.*) Manufacturers of Steel *Illinois Steel Co L^d*
 Total Heating Surface of Boilers *5162* Is Forced Draft fitted *Yes* No. and Description of Boilers *2 of Scott Marine*
 Working Pressure *180 lb* Tested by hydraulic pressure to *300 lb* Date of test *Jul 8, 1919* No. of Certificate *22*
 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 of Mann Type* Area of each valve *9.62* Pressure to which they are adjusted *180 lb* Are they fitted with easing gear *Yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *14'-0"* Mean dia. of boilers *15'-6"* Length *11'-6"* Material of shell plates *Steel*
 Thickness *13/8* Range of tensile strength *60,000* Are the shell plates welded or flanged *Yes* Descrip. of riveting: cir. seams *Double Rivet Lap*
 Diameter of rivet holes in long. seams *13/8* Pitch of rivets *9 3/16* Lap of plates or width of butt straps *19 7/8*
 Percentages of strength of longitudinal joint rivets *87.2* Working pressure of shell by rules *192.5* Size of manhole in shell *12" x 16"*
 Diameter of compensating ring *2'-9" x 3'-1 1/2"* No. and Description of Furnaces in each boiler *3 of Monoisie* Material *Steel* Outside diameter *4'-2 1/4"*
 Length of plain part top *19 1/2* Description of longitudinal joint *Yes* No. of strengthening rings *1*
 Thickness of plates bottom *19 1/2* Working pressure of furnace by the rules *187.5* Combustion chamber plates: Material *Steel* Thickness: Sides *5/8* Back *5/8* Top *5/8* Bottom *15/16*
 Thickness of stays to ditto: Sides *7 1/2 x 9* Back *8 1/2 x 8* Top *7 1/2 x 9* If stays are fitted with nuts or riveted heads *Yes* Working pressure by rules *187*
 Material of stays *Steel* Area at smallest part *1.77* Area supported by each stay *675* Working pressure by rules *210* End plates in steam space:
 Material *Steel* Thickness *1 1/16* Pitch of stays *15 x 18* How are stays secured *Double Rivets* Working pressure by rules *184* Material of stays *Steel*
 Area at smallest part *5.25* Area supported by each stay *270* Working pressure by rules *202* Material of Front plates at bottom *Steel*
 Thickness *13/16* Material of Lower back plate *Steel* Thickness *13/16* Greatest pitch of stays *10 1/2 x 8 1/2* Working pressure of plate by rules *182.5*
 Diameter of tubes *3"* Pitch of tubes *4 1/4* Material of tube plates *Steel* Thickness: Front *13/16* Back *3/4* Mean pitch of stays *8 1/2 x 4 1/2*
 Thickness across wide water spaces *13 1/2* Working pressures by rules *249* Girders to Chamber tops: Material *Steel* Depth and
 Thickness of girder at centre *10 x 1/4* Length as per rule *2'-8"* Distance apart *9"* Number and pitch of stays in each *3 of 7 1/2"*
 Working pressure by rules *226* Steam dome: description of joint to shell *Yes* % of strength of joint *Yes*
 Diameter *Yes* Thickness of shell plates *Yes* Material *Yes* Description of longitudinal joint *Yes* Diam. of rivet holes *Yes*
 Pitch of rivets *Yes* Working pressure of shell by rules *Yes* Crown plates *Yes* Thickness *Yes* How stayed *Yes*

SUPERHEATER. Type *Yes* Date of Approval of Plan *Yes* Tested by Hydraulic Pressure to *Yes*
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *Yes*
 Is Easing Gear fitted *Yes*



8800-5472-12

IS A DONKEY BOILER FITTED?

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, one Set of Coupling Bolts, one Set of Feed
Pump Suction & Discharge Valves, 3 Main Feed Check Valves, 3 Auxiliary
Feed Check Valves, 24 Bolts & Nuts 6 Cylinder Cover Studs & Nuts
& Steam Chest Cover Studs & Nuts, Iron of various Sizes, one H.P.
Piston Valve, Spare Cast Iron Propeller, 12 Boiler Tubes, 24 Condenser
Tubes & Studs, one Set of Bilge Pump Valves, one Set of Piston Spr...

The foregoing is a correct description,

WALLACE SHIPYARDS, LTD.

Manufacturer.

Dates of Survey while building: During progress of work in shops -- Dec-18, 24, 26, 30 1918, Jan. 3, 6, 17, 18, 29, 31, Feb. 3, 5, 8, 17, 24, 25, Mar. 3, 5, 26, 31, April, 2, 8, 12, 17, 22, May 5, 8, 13, 14, 19, 28, 29, July 4, 8, 14, 21, Aug. 2, 3, 4 (1919) Is the approved plan of main boiler forwarded herewith Yes, 43 visits

Dates of Examination of principal parts: Cylinders 12/4/19 Slides 12/4/19 Covers 8/4/19 Pistons 8/4/19 Rods 8/4/19
Connecting rods 3/3/19 Crank shaft 3/3/19 Thrust shaft 3/3/19 Tunnel shafts 3/3/19 Screw shaft 3/3/19 Propeller 14/5/19
Stern tube 5/5/19 Steam pipes tested 25/7/19 Engine and boiler seatings 14/7/19 Engines holding down bolts 14/7/19
Completion of pumping arrangements 14/5/19 Boilers fixed 14/7/19 Engines tried under steam 4/8/19
Completion of fitting sea connections 5/5/19 Stern tube 5/5/19 Screw shaft and propeller 29/5/19
Main boiler safety valves adjusted 4/8/19 Thickness of adjusting washers 5 1/16" 1 7/8" 5/16" 1 7/8" 5/16" 1 7/8"
Material of Crank shaft Steel Identification Mark on Do. Material of Thrust shaft Steel Identification Mark on Do.
Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do.
Material of Steam Pipes Steel 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: Canadian Volunteer

General Remarks (State quality of workmanship, opinions as to class, &c.) The Engines & Boilers of the Vessel have been built under Special Survey & installed under Special Survey in accordance with approved plans, together with the Auxiliaries, Piping, Mountings, Fittings, Sea Connections &c. The material & workmanship are both of Good Quality, on Completion of the Machinery installed the Vessel was tried under full Steam at Sea, and found satisfactory. Safety Valves were floated independently. Tail Shaft is a continuous Linier. The Machinery & Boilers are eligible in my opinion to have the Record of L.M.C. 8.19 made in the Register Book in the case of this vessel.

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 8.19 FD.

The amount of Entry Fee ... \$15.00 :
Special ... \$96.87 :
Main Boiler Fee ... \$96.88 :
Travelling Expenses (if any) £ :
When applied for, Aug. 9, 1919
When received, 26/9/19

Geo. P. M. Gowen
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 16 SEP. 1919
Assigned + L.M.C. 8.19
F.D.

Vancouver B.C.

Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.

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