

# REPORT ON MACHINERY.

MON. 31 MAR. 1919  
No. 700

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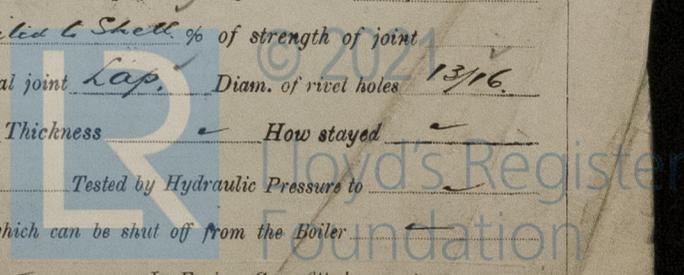
Date of writing Report *24 Jan 19* When handed in at Local Office *24 Jan 19* Port of *Vancouver, B.C.*  
 No. in Survey held at *Victoria, B.C.* Date, First Survey *July 23 1918*, Last Survey *21 January 1919*  
 Reg. Book. on the *Wood Single Screw Steam Ship War Steamer* (Number of Visits *10*)  
 Master *W. Torwell* Built at *Victoria* By whom built *Cameron, Cameron & Co.* When built *1918*  
 Engines made at *Goderech* By whom made *National S. B. Co.* when made *1918*  
 Boilers made at *Toronto* By whom made *Polson Iron Works* when made *1918*  
 Registered Horse Power *1400* Owners *Easton, Craig & Co.* Port belonging to *Victoria, B.C.*  
 Nom. Horse Power as per Section 28 *323, 322* Is Refrigerating Machinery fitted for cargo purposes *Yes* Is Electric Light fitted *Yes*

**ENGINES, &c.**—Description of Engines *Triple Expansion Marine Type* No. of Cylinders *3* No. of Cranks *3*  
 Dia. of Cylinders *20" 33" 54"* Length of Stroke *40"* Revs. per minute *78* Dia. of Screw shaft as per rule *11 1/2"* 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 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 *Yes* If two liners are fitted, is the shaft lapped or protected between the liners *Yes* Length of stern bush *4'-1"*  
 Dia. of Tunnel shaft as per rule *10.39"* Dia. of Crank shaft journals as per rule *10.9"* Dia. of Crank pin *1 1/16"* Size of Crank webs *22x7* Dia. of thrust shaft under collars *1 1/8"* Dia. of screw *14.6"* Pitch of Screw *15.3"* No. of Blades *4* State whether moveable *Yes* Total surface *66'-4"*  
 No. of Feed pumps *2* Diameter of ditto *3.5"* Stroke *20"* Can one be overhauled while the other is at work *Yes*  
 No. of Bilge pumps *2* Diameter of ditto *3.5"* Stroke *20"* Can one be overhauled while the other is at work *Yes*  
 No. of Donkey Engines *3* Sizes of Pumps *8x6x12 - 6x4x6* No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room *4-3" 1-6" 1 1/2 x 9 x 10* In Holds, &c. *2-2 1/2" 4-3"*  
 No. of Bilge Injections *1* sizes *6"* Connected to condenser, or to circulating pump *Pump* Is a separate Donkey Suction fitted in Engine room & size *Yes 3"*  
 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 *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 *Bilge* How are they protected *Iron Sheathing*  
 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 Engine Room platform*

**BOILERS, &c.**—(Letter for record *S.*) Manufacturers of Steel *Leekens, P.A.*  
 Total Heating Surface of Boilers *5280* Is Forced Draft fitted *Yes* No. and Description of Boilers *2 Water Tube Boilers 2 Wooden 3 Clement Patent*  
 Working Pressure *185 lb* Tested by hydraulic pressure to *280 lb* Date of test *19/5/18* No. of Certificate *4*  
 Can each boiler be worked separately *Yes* Area of fire grate in each boiler *60 sq* No. and Description of Safety Valves to each boiler *2 Spring Loaded* Area of each valve *8.20* Pressure to which they are adjusted *185 lb* Are they fitted with easing gear *Yes*  
 Smallest distance between boilers or uptakes and bunkers or woodwork *27"* Mean dia. of boilers *18 1/16"* Length *90"* Material of shell plates *Steel*  
 Thickness *1 1/16"* Range of tensile strength *28-32* Are the shell plates welded or flanged *Yes* Descrip. of riveting: cir. seams *Single*  
 long. seams *Double* Diameter of rivet holes in long. seams *7/8"* Pitch of rivets *2.65"* Lap of plates or width of butt straps *4 1/16"*  
 Per centages of strength of longitudinal joint rivets *79.9* Working pressure of shell by rules *218* Size of manhole in shell *16x12"*  
 Size of compensating ring *Yes* No. and Description of Furnaces in each boiler *Yes* Material *Yes* Outside diameter *Yes*  
 Length of plain part top *Yes* Thickness of plates crown *Yes* Description of longitudinal joint *Yes* No. of strengthening rings *Yes*  
 Working pressure of furnace by the rules *Yes* Combustion chamber plates: Material *Yes* Thickness: Sides *Yes* Back *Yes* Top *Yes* Bottom *Yes*  
 Pitch of stays to ditto: Sides *Yes* Back *Yes* Top *Yes* If stays are fitted with nuts or riveted heads *Yes* Working pressure by rules *Yes*  
 Material of stays *Yes* Area at smallest part *Yes* Area supported by each stay *Yes* Working pressure by rules *Yes* End plates in steam space: *Yes*  
 Material *Steel* Thickness *1"* Pitch of stays *15x15* How are stays secured *Yes* Working pressure by rules *199* Material of stays *Steel*  
 Area at smallest part *Yes* Area supported by each stay *Yes* Working pressure by rules *Yes* Material of Front plates at bottom *Steel*  
 Thickness *3/8"* Material of Lower back plate *Steel* Thickness *3/4"* Greatest pitch of stays *Dished* Working pressure of plate by rules *185*  
 Diameter of tubes *2"* Pitch of tubes *3 1/8 x 3 3/4* Material of tube plates *Steel* Thickness: Front *1 3/8"* Back *1 3/8"* Mean pitch of stays *Yes*  
 Pitch across wide water spaces *Yes* Working pressures by rules *Yes* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *6 1/4 x 2 1/4* Length as per rule *2 11 3/16* Distance apart *6"* Number and pitch of stays in each *4 of 6 3/4"*  
 Working pressure by rules *200* Steam dome: description of joint to shell *Steam Yozgle Riveted to Shell* % of strength of joint *Yes*  
 Diameter *27"* Thickness of shell plates *7/16"* Material *Steel* Description of longitudinal joint *Lap* Diam. of rivet holes *13/16"*  
 Pitch of rivets *2.5"* Working pressure of shell by rules *235* Crown plates *Yes* Thickness *Yes* How stayed *Yes*

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

2810-155900-925900



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied: - Two Top End bolts & nuts, Two Bottom End Bolts & nuts, Two Main Bearing bolts & nuts one Set of Coupling Bolts & nuts one set of circulating pump valves, one set of air pump valves, one set of feed and one set of bilge pump valves, 25 condenser tubes, one set of Piston Rings assorted Bolts & nuts.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 3/7/18, 25/8/18, 6/9/18, 13/9/18, 16/10/18, 31/10/18, 6/11/18, 15/11/18, 27/11/18; During erection on board vessel --- 2/12/18; Total No. of visits 10. Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts - Cylinders 25/8/18, Slides 25/8/18, Covers 25/8/18, Pistons 6/9/18, Rods 13/9/18, Connecting rods 6/10/18, Crank shaft 13/10/18, Thrust shaft 16/10/18, Tunnel shafts 16/10/18, Screw shaft 23/7/18, Propeller 23/7/18, Stern tube 23/7/18, Steam pipes tested 31/10/18, Engine and boiler seatings 31/10/18, Engines holding down bolts 6/11/18, Completion of pumping arrangements 15/10/18, Boilers fixed 27/10/18, Engines tried under steam 2/12/18, Completion of fitting sea connections 23/7/18, Stern tube 23/7/18, Screw shaft and propeller 23/7/18, Main boiler safety valves adjusted 2/12/18, Thickness of adjusting washers Port Boiler 3/16, Starboard Boiler 3/16.

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 300 lb per sq inch.

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 Yes. If so, state name of vessel War Luce.

General Remarks (State quality of workmanship, opinions as to class, &c. The following elements are

Table with 6 columns: Port Header, Port Element, Port Element, Starboard Header, Starboard Element, Starboard Element. Rows list various boiler components and their specifications.

The Engines & Boilers have been built and installed under Special Survey, and in accordance with the approved plans, together with Auxiliaries Piping Mountings & fittings & Sea Connections, The material and workmanship are both of Good Quality, On completion the Machinery was tried under Steam & found Satisfactory

Downton Pump & connections examined tested & found in good order.

Tail Shaft to be examined at joint of Lenes in 12 months time

The Machinery & Boilers are Eligible to have record in my opinion of + L.M.C 12.18, B.S. 12.18, made in the Register Book in the Case of this Vessel.

The amount of Entry Fee ... £ ... When applied for, Feb 24 1919. Special 1/3 ... £ 21.20.50. Donkey Boiler Fee ... £ 6.50. Travelling Expenses (if any) £ 19.00. When received, 17.4 1919.

Committee's Minute TUE. 8 - APR. 1919. Assigned See Note on 801

TUE. 19 JUL. 1921. James Murdoch, Engineer Surveyor to Lloyd's Register of Shipping.

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

