

REPORT ON MACHINERY.

Date of writing Report *Oct 19th 18* When handed in at Local Office *Oct 19th 18* Port of *Vancouver B.C.*
 No. in Survey held at *Victoria B.C.* Date, First Survey *Jan 2nd 18* Last Survey *Oct 10th 1918*
 Reg. Book. *1861 on the Single Screw Wood Steamer "Wai Sheena"* (Number of Visits *14*)
 Master *J. Abbit* Built at *Victoria B.C.* By whom built *Comera Geroa Madsen* Tons Gross *2342 1/2* Net *1416 1/2*
 Engines made at *Motuel* By whom made *The Dominion Engine Co. 1918* when made *2-18*
 Boilers made at *Motuel* By whom made *Canadian Tickers Ltd* when made *1918*
 Registered Horse Power *1400* Owners *Eastney & Co (Glasgow)* Port belonging to *Victoria B.C.*
 Nom. Horse Power as per Section 28 *322* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

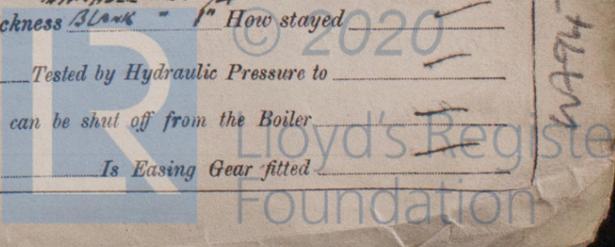
ENGINES, &c.—Description of Engines *Indirect Triple Expansion* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *20, 33 x 54* Length of Stroke *40* Revs. per minute *78* Dia. of Screw shaft *11 1/2* as per rule *11 1/2* as fitted *12* Material of screw shaft *Steel*
 Is the screw shaft fitted 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 *48"*
 Dia. of Tunnel shaft *10 3/8* as per rule *10 3/8* as fitted *10 5/8* Dia. of Crank shaft journals *10 9/16* as per rule *10 9/16* as fitted *1 1/8* Dia. of Crank pin *1 1/8* Size of Crank webs *3 5/8 x 7* Dia. of thrust shaft under collars *1 1/2* Dia. of screw *1 1/2* Pitch of Screw *15 3/8* No. of Blades *4* State whether moveable *No* Total surface *66.4*
 No. of Feed pumps *2* Diameter of ditto *3 1/2* Stroke *20* Can one be overhauled while the other is at work *Yes*
 No. of Bilge pumps *2* Diameter of ditto *3 1/2* Stroke *20* Can one be overhauled while the other is at work *Yes*
 No. of Donkey Engines *3* Sizes of Pumps *7 1/2 x 9 x 10 - 6 x 4 x 6 - 10 x 9 x 12* No. and size of Suctions connected to both Bilge and Donkey pumps in Engine Room *3 - 3"* In Holds, &c. *10 - 3"*
 No. of Bilge Injections *1* sizes *4"* 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 *Valves*
 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 *No*
 What pipes are carried through the bunkers *3 Bilge Suction Lines* How are they protected *Woolen Baggies and Sheeting*
 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 *Engine Room Top Platform*
Lukens P.M.

BOILERS, &c.—(Letter for record *LS*) Manufacturers of Steel
 Total Heating Surface of Boilers *52700* Is Forced Draft fitted *Yes* No. and Description of Boilers *2 Main Water Tube*
 Working Pressure *185 lbs* Tested by hydraulic pressure to *285 lbs* Date of test *Aug 14th 18* No. of Certificate *✓*
 Can each boiler be worked separately *Yes* Area of fire grate in each boiler *60 sq ft* No. and Description of Safety Valves to each boiler *2 Main Type* Area of each valve *8.295 sq in* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear *Yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *10"* Mean dia. of boilers *—* Length *—* Material of shell plates *Steel*
 Thickness *3/16* Range of tensile strength *26-30* Are the shell plates welded or flanged *No* 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 1/2*
 Per centages of strength of longitudinal joint *67.0* Working pressure of shell by rules *299* Size of manhole in shell *16" x 12"*
 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 *Steel* Thickness: Sides *—* Back *—* Top *1 1/8"* Bottom *—*
 Pitch of stays to ditto: Sides *—* Back *—* Top *6 x 6 1/2* If stays are fitted with riveted heads *Yes* Working pressure by rules *—*
 Material of stays *Steel* Area at smallest part *101 sq in* Area supported by each stay *40.5 sq in* Working pressure by rules *197* End plates in steam space: *—*
 Material *Steel* Thickness *7/8* 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 *Steel*
 Thickness *7/8* Material of Lower back plate *Steel* Thickness *3/4* Greatest pitch of stays *—* Working pressure of plate by rules *—*
 Diameter of tubes *2"* Pitch of tubes *2 1/4 x 3 1/2* Material of tube plates *Steel* Thickness: Front *1 1/8* Back *1 1/8* Mean pitch of stays *—*
 Pitch across wide water spaces *—* Working pressures by rules *—* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *6 1/4 x 18 1/2* Length as per rule *—* Distance apart *6"* Number and pitch of stays in each *40 6 1/2"*
 Working pressure by rules *197* Steam dome: description of joint to shell *Start in part is covered with plate % of strength of joint*
 Diameter *2 1/2* Thickness of shell plates *7/16* Material *Steel* Description of longitudinal joint *—* Diam. of rivet holes *13/16*
 Pitch of rivets *2 1/2* Working pressure of shell by rules *252 lbs* Crown plates *Steel* Thickness *Blank - 1"* 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 Valves *—* Pressure to which each is adjusted *—* Is Easing Gear fitted *—*

Where and when Superintendent
 Bradley Hea
 S. S. P.
 AND WAR
 Size.
 Breaking Test of Steel Wire Towline.
 11"
 6"
 6"
 3" steam
 3" for peak
 3" tall like
 board?
 4-9 x 4-3 (2)
 16-4; 10-5-14
 to each hole
 to 1/2"
 4
 Secretaries
 are fitted
 type 2 1/2 x 3/4
 nuts through
 every 3 feet
 in each foot
 The farbo
 e bolted
 The whole
 olinum,
 of beams
 verified
 deep tank
 le to make
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 ing plate
 on has
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 approved
 hed.
 R. Polking
 Register of Shipping
 1919
 2m. 116. T.

W474-0003



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— No Connecting Rod Top End Bolts & Nuts
No Connecting Rod Bottom End Bolts & Nuts. No Main Bearing Bolts
No Set of Coupling Bolts. No Set of Feed & Edge Pump Valves. No
Set of Air Pump valves. No Set of Piston Springs. No Set of Circulating
Pump valves. Twenty six Cast Iron Fikes. Fifty screwed Senales. Assorted
Bolts & Nuts of various sizes. ✓

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - }
{ During erection on board vessel - - - }
Total No. of visits 14. Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders June 2nd Slides June 2nd Covers June 9th Pistons June 2nd Rods June 9th
Connecting rods June 9th Crank shaft July 4th Thrust shaft July 4th Tunnel shafts June 9th Screw shaft June 9th Propeller June 11th
Stern tube June 5th Steam pipes tested Sept 21 Engine and boiler seatings July 8th Engines holding down bolts Aug 22nd 18
Completion of pumping arrangements Sept 21st 18 Boilers fixed July 25th 1918 Engines tried under steam Oct 10th 1918
Completion of fitting sea connections June 11th 1918 Stern tube June 9th 18 Screw shaft and propeller June 11th 1918
Main boiler safety valves adjusted Oct 10th 1918 Thickness of adjusting washers P1 3/64 S1 1/16 N1 13/32 SV 7/16
Material of Crank shaft Ash Identification Mark on Do. 23-11-13 1918 Material of Thrust shaft Ash Identification Mark on Do. 1-10-17 1918
Material of Tunnel shafts Ash Identification Marks on Do. 14-10-17 1918 Material of Screw shafts Ash Identification Marks on Do. 18-11-17 1918
Material of Steam Pipes Steel ✓ Test pressure 500 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. No If so, state name of vessel.

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

Complementary of the Billets fitted in this vessel.

PORT HEADER	No 1A	No 1B	No 1C	STAR HEADER	No 7A	No 7B	No 7C
No 14	L.T. 280 lbs	L.T. 280 lbs	L.T. 280 lbs	No 7	L.T. 370 lbs	L.T. 370 lbs	L.T. 370 lbs
L.T. 280 lbs	18-5-18	18-5-18	18-5-18	L.T. 370 lbs	16-3-18	16-3-18	16-3-18
18-5-18	J.R. JEL	J.R. JEL	J.R. JEL	13-3-18	W.T.A. JEL	W.T.A. JEL	W.T.A. JEL
W.S. JEL	J.R. JEL	J.R. JEL	J.R. JEL	W.T.A. JEL	W.T.A. JEL	W.T.A. JEL	W.T.A. JEL

The Engines and Billets have been built & installed under special survey and in accordance with the approved plans together with auxiliaries piping, Mantrags, fittings and Sea Connections. Down the Pump & Connections found satisfactory.

The Materials and Workmanship are both of Good. On completion the Machinery was tried under steam and found satisfactory. The Machinery & Billets are eligible in my opinion to have the Record L.M.C 10-18 B.P 10-18 made in the Register Book in the case of this vessel.

NOTE! THE SHAFT TO BE EXAMINED AT JOINT OF LINER IN TWELVE MONTHS TIME (TELEGRAM: APRIL 1st 1919 E.L. SALMON NEW YORK)

The amount of Entry Fee ... £ 60 : : When applied for.
Special ... £ 120 : 50 : :
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) ... £ 46 : 00 : :
NEW YORK ... £ 6 : 50 : :
Committee's Minute TUE. 10. DEC. 1918

James Murdoch, Engineer Surveyor to Lloyd's Register of Shipping.

Assigned + L.M.C. 10-18 TUE. JAN. 20. 1920

MACHINERY CERTIFICATE WRITTEN. TUE. 13. JAN. 1920. TUE. 27. MAY. 1919. FRI. OCT. 3-10 1919. Lloyd's Register of Shipping. FRI. 9-JAN. 1920.

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