

Rpt. 4.

REPORT ON MACHINERY.

 MON. 31 MAR 1919
 No. 700

REC'D NEW YORK

Received at London Office

Date of writing Report 24 Jan 1919 When handed in at Local Office 24 Jan 1919 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. Vorwell Built at Victoria By whom built Cameron, Canada Mill Tons Gross 2334.82 Net 1415.69
 Engines made at Goderich By whom made National S. B. Co. when made 1918
 Boilers made at Toronto By whom made Solomon Iron Works when made 1918
 Registered Horse Power 1400 Owners Easton, Greig & Co. Port belonging to Victoria, B.C.
 Nom. Horse Power as per Section 28 323.32 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 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 1/2" Size of Crank webs 22x7 Dia. of thrust shaft under collars 11 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 2-1 1/2" 4-3"
 In Engine Room 4-3" 1-6" 1 1/2x9x10 In Holds, &c. 2-1 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 No
 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 5240 Is Forced Draft fitted Yes No. and Description of Boilers 2 Water Tube Boilers
 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 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 1/2" 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 Yes
 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 1/8x3 1/4 Material of tube plates Steel Thickness: Front 1 1/8" Back 1 1/8" 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 1/4x2 1/4 Length as per rule 2 1/4 3/16 Distance apart 6" Number and pitch of stays in each 4 of 6 1/4"
 Working pressure by rules 200 Steam dome: description of joint to shell Steam Tangle 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 1/2" 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

If so, is a report now forwarded?

State the articles supplied :—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	{	During progress of work in shops - - }										
		During erection on board vessel - - }	3/4/18.	25/8/18.	6/9/18.	13/9/18.	16/10/18.	31/10/18.	6/11/18.	15/11/18.	27/11/18.	
		Total No. of visits	2/12/18	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 23/7/8. Steam pipes tested 31/10/8. Engine and boiler seatings 31/10/8. Engines holding down bolts 6/11/8.

Completion of pumping arrangements 15/10/18. Boilers fixed 27/10/18. Engines tried under steam 3/12/18.

Completion of fitting sea connections 23/2/18. Stern tube 23/7/18. Screw shaft and propeller 23/7/18.

Main boiler safety valves adjusted 2/12/08. Thickness of adjusting washers 1/16 3/8.

Material of Crank shaft Steel Identification Mark on Do. 3237
2744
ATT

Material of Thrust shaft Steel Identification Mark on Do. 2744
ON

Material of Crank shaft <i>Steel</i>	Identification Mark on Do.	<i>1917</i>	Material of Pinial Shaft	<i>91</i>
Material of Tunnel shafts <i>Steel</i>	Identification Marks on Do.	<i>118. 510 310117</i>	Material of Screw shafts <i>Steel</i>	Identification Marks on Do.
				<i>3.12.1 w.v.5</i>

Material of Tunnel shafts	Identification Marks on Do.	Material of Lined shafts
Steel	FWT	Test pressure 560 lb per sq inch.

Material of Steam Pipes Steel Test pressure 150

To the flash point of the oil to be used over 150° F.

Is an installation fitted for burning oil fuel Yes. Is the flash point of the oil to be used over 100 F. Yes.

Have the requirements of Section 49 of the Rules been complied with Yes War-Lace \$

Is this machinery duplicate of a previous case *Yes.* If so, state name of vessel *Mar. Eagle.*

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

14. Trans. of Boiler installed in this vessel.

Complementarity of the Roles involved in

Port Header, no. 118.	Port Element no. 118.	Port Element no. 118.	Starboard Header, no. 118.	Starboard Element no. 118.	Starboard Element no. 118.
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[illegible]

1918 2. 8. 18 P.C.B.	2. 8. 18 P.C.B.	1918/18 P.C.B.	1918/18 P.C.B.	1918/18 P.C.B.	1918/18 P.C.B.
				St. Charles & Elements.	

Port element.	20. 46.
20. 45.	20. 46.
L. 280.	L. 280.
W. 185.	W. 185.

2/10 2 R.C.B. 1 to built and installed under Special Purser and

The Engines & Boilers have been built under insurance cover.

in accordance with the approved plans, together with auxiliary typing

Mountings & fittings & Sea Connections, The material and workmanship

are both of Good Quality. On completion the Machinery was tried

P. t. spectans

Under Steam & found satisfactory

Downton Pump & connections examined tested & found in good

order

Yail Bluff to be examined at point of Lenes in 12 months time

Yf *32* *a B l* *E d* *l t* *t o u* *r e c o m m e n d e r i n m y o p i n i o n*

The Machinery & Boilers are Eligible to have Recognition of the

of + L.M.C 12.18. 13.S. 12.18, made in the Register Book in the Case of this Vessel.

The amount of Entry Fee ... \$: : When applied for,

Special 1/3 2120 50 : Feb 24th 1919 James Murdoch.

Donkey Boiler Fee ... £ 6 : 50 :
New York Express
 When received,
 10/10/1911
 Engineer-Surveyor to Lloyd's Register of Shipping.

Travelling Expenses (if any) £ 19 : 00 :

Committee's Minute TUE. 8-APR. 1919 + L. MC 1:19 F.D. TUE. 10 FEB. 1919

Committee's Minute

Assigned Alfred W. Smith

TUE. 19 JUL. 1921