

# REPORT ON MACHINERY.

No. 543

REC'D NEW YORK April 15-1919

Received at London Office

1 when tested and  
erintendent.

14/er Warholm Built at Aberdeen By whom built Grays Harbor Ship Building Co

es made at Tacoma By whom made Puget Sound Iron & Steel Works when made 1917

end that made at Seattle By whom made Seattle Boiler Works when made 1917

WARPS. lered Horse Power 700 Owners Balestrand Navigation Corp. Port belonging to New York

Horse Power as per Section 28 200 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes

30-INCHES, &c.—Description of Engines 250 H.P. No. of Cylinders 8 No. of Cranks 4

2-90 of Cylinders 16 1/2 Length of Stroke 22 Revs. per minute 210 Dia. of Screw shaft 7 3/4 Material of M.S.

screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight

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

in the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

inner job are fitted, is the shaft lapped or protected between the liners Yes lapped Length of stern bush 23 1/4

Tunnel shaft as per rule Dia. of Crank shaft journals as per rule 7 1/4 Dia. of Crank pin 7 1/4 Size of Crank webs 5 3/4 x 9 1/4 Dia. of thrust shaft under

7 5/8 Dia. of screw 6 Pitch of Screw 5 No. of Blades 3 State whether moveable No Total surface 10' 7"

Feed pumps 1 Diameter of ditto 4 1/2 Stroke 4 Can one be overhauled while the other is at work Injector

Bilge pumps 2 Diameter of ditto 7 Stroke 7 Can one be overhauled while the other is at work Yes

Donkey Engines 1-20 H.P. Sizes of Pumps 1 Centrifugal Motor driven No. and size of Suctions connected to both Bilge and Donkey pumps

3" centre line Room 3-3 In Holds, &c. 3-3

Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size Yes-3"

at 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

connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves

y fixed sufficiently high on the ship's side to be seen without lifting the stowaway plates Yes Are the Discharge Pipes above or below the deep water line Above

y 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.

ated, the pipes are carried through the bunkers None How are they protected

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

galv'd Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

FRS, &c.—(Letter for record ) Manufacturers of Steel Central Iron & Steel Co Harrisburg Pa.

length heating Surface of Boilers 6250 sq ft Is Forced Draft fitted No. and Description of Boilers 1 Dry Back Hor. Tubular 1-30 Furnace

Pressure 125 Tested by hydraulic pressure to 187 1/2 Date of test No. of Certificate

boiler be worked separately Area of fire grate in each boiler 13 3/4 sq ft No. and Description of Safety Valves to

with side 1-2 1/2 Lunkhimer Area of each valve 4 9/16 Pressure to which they are adjusted 125 Are they fitted with easing gear Yes

and of distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 72 Length 9' 6" Material of shell plates 5 main steel

the assig Range of tensile strength 61 66300 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Single Lap

the bottom Triple Butt Diameter of rivet holes in long. seams 13/16 Pitch of rivets 2 1/2 Lap of plates or width of butt straps 12"

of strength of longitudinal joint rivets 88.0 sq ft Working pressure of shell by rules 143 Size of manhole in shell 11" x 15"

in compensating ring 3/4 x 26 x 30 No. and Description of Furnaces in each boiler 1-30 x 9-6 Material 7/16 Outside diameter 30 7/8



IS A DONKEY BOILER FITTED? Yes

If so, is a report now forwarded? *Attached to this report*

*SPARE GEAR. State the articles supplied:—*

- 1 Complete crank pin brass, with bolts ✓  
1 Complete crosshead pin brass, with bolts: ✓  
1 Complete main Journal brass: ✓  
1 Complete combustion chamber: ✓  
1 Oil injection Nozzle: ✓  
1 Oil injection pump check valve ✓

*The foregoing is a correct description,*

The Puget Sound Iron and Steel Works

BU

ACT'G. SECT'Y.

*Manufacturer.*

Dates of Survey while building	{	During progress of
		work in shops - -
		During erection on
		board vessel - - -
		Total No. of visits

July 24 July 26 Aug. 6<sup>th</sup> <sup>24<sup>th</sup></sup> Sept. 7<sup>th</sup> Oct. 2<sup>nd</sup> Nov. 23<sup>rd</sup>  
Dec 10, 1914. Jan 26, Feb 9, 10, 11, 14<sup>th</sup> 1918.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders Aug 6<sup>th</sup> Slides Aug 6<sup>th</sup> Covers Aug 6<sup>th</sup> Pistons Aug 6<sup>th</sup> Rods Aug 6<sup>th</sup>  
Connecting rods July 26 Crank shaft July 26<sup>th</sup> Thrust shaft July 26<sup>th</sup> Tunnel shafts ✓ Screw shaft Sept 4<sup>th</sup> Propeller Sept 4<sup>th</sup>  
Stern tube Aug 24<sup>th</sup> Steam pipes tested ✓ Engine and boiler seatings ✓ Engines holding down bolts Jan 26<sup>th</sup>  
Completion of pumping arrangements Jan 26<sup>th</sup> 1918 Boilers fixed Jan 26<sup>th</sup> 1918 Engines tried under steam Feb 9, 10, & 11, 1918  
Completion of fitting sea connections Sept 4<sup>th</sup> Stern tube Sept 4<sup>th</sup> Screw shaft and propeller Sept 4<sup>th</sup>  
Main boiler safety valves adjusted — Thickness of adjusting washers —  
Material of Crank shaft Steel Identification Mark on Do. X Material of Thrust shaft Steel Identification Mark on Do. ✓  
Material of Tunnel shafts — Identification Marks on Do. ✓ Material of Screw shafts two Identification Marks on Do. ✓  
Material of Steam Pipes — Test pressure ✓

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 Aus Sch "Mount Ranier"

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

These

Two Engines built at Tacoma Wash. under special survey and shipped to Aberdeen and installed on board with shafting auxiliaries fittings and connections all under special survey in accordance with the rules. The material & workmanship found good. When completed the machinery tested under working conditions on continuous 6 hour run. Speed made about  $7\frac{1}{2}$  knots Rev. 200 to 250 per minute Draft - mean 17 - 18 Air press. in receiver adjusted to 300 lbs starting and reversing of engines easily accomplished with 150 lbs air pressure. The machinery of this vessel is eligible in my opinion to be classed and to have the record of Oil Engines & I.M.E. 18. Made in the register Book

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC. 2.18

Oil Engines. 25C.5A. 8Cy. 16½"-22" D.B. 125 1/16

The amount of Entry Fee	...	\$ 20.00:	} When applied for, Feb'y 23 <sup>rd</sup> 1918
Special	... ..	\$ 150.00:	
Donkey Boiler Fee	...	\$ 25.00:	
Travelling Expenses (if any)	\$	55.23:	} When received, March 1 <sup>st</sup> 1918
	\$	12.45	

Puget-Sound Iron & Steel Works.  
Tacoma. Wash. 17

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute New York APR 16 1918

*Assigned*

+ dml. 2.18

elec. light

TUE 13 MAY 1919

FRI. 7-NOV. 1919

TUE. 6-JAN. 1920

Lloyd's Register  
Foundation