

Rpt. 4.

# REPORT ON MACHINERY.

No. 722

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Received at London Office

Date of writing Report **23 Oct 1918** When handed in at Local Office **Oct 24<sup>th</sup> 1918** Port of **Seattle Washington U.S.A.**

No. in Survey held at **Seattle Washington** Date, First Survey **24<sup>th</sup> June** Last Survey **Sept 3<sup>rd</sup> 1918**  
Reg. Book. (Number of Visits **18**)

Master **E Sewal** Built at **Seattle Wash** By whom built **J. J. Kluthie & Co.** Tons <sup>Gross</sup> **5676** <sub>Net</sub> **4157**

Engines made at **Schenectady N.Y.** By whom made **General Electric Co** when made **1918**

Boilers made at **Seattle Wash** By whom made **Commercial Boiler Wks** when made **1918**

Registered Horse Power **2500 SHP** Owners **U.S. Shipping B<sup>o</sup> & Emergency Fleet Corp<sup>n</sup>** Port belonging to **Seattle**

Nom. Horse Power as per Section 28 **4166** <sup>568</sup> Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**

**ENGINES, &c.**—Description of Engines **Geared Turbine** No. of Cylinders **13** No. of Cranks **13**

Dia. of Cylinders **13.79** as per rule **13.81** Length of Stroke **19.5** as fitted **19.5** Revs. per minute **90** Propeller **90** Dia. of Screw shaft **14.5** as fitted **14.5** 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'-11"**

Dia. of Tunnel shaft **12.5** as per rule **12.48** as fitted **12.34** Dia. of Crank shaft journals **12.5** as per rule **12.48** as fitted **12.34** Dia. of Crank pin **13.79** Size of Crank webs **13.81** Dia. of thrust shaft under collars **13.3/8** Dia. of screw **16'-6"** Pitch of Screw **14'-2"** No. of Blades **4** State whether moveable **yes** Total surface **71.48**  $\frac{1}{2}$

No. of Feed pumps **2** Diameter of ditto **10"** Stroke **16** Can one be overhauled while the other is at work **yes**

No. of Bilge pumps **1** Diameter of ditto **8"** Stroke **10** Can one be overhauled while the other is at work **yes**

No. of Donkey Engines **1** <sup>Fire & Bilge</sup> Sizes of Pumps **12 x 10 1/2 x 16** No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room **4. 3 1/2"** Boiler Room **2. 3 1/2"** In Holds, &c. (N<sup>o</sup> 1) **2. 3 1/2"** (N<sup>o</sup> 2) **2. 3 1/2"** (N<sup>o</sup> 3) **2. 3 1/2"**

(N<sup>o</sup> 4) **4. 3 1/2"** Recess **1. 3 1/2"** Shaft Tunnel **2. 3 1/2"** No. of Bilge Injections **1** sizes **10** Connected to condenser, or to circulating pump **yes** Is a separate Donkey Suction fitted in Engine room & size **yes 2. 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**

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**

What pipes are carried through the bunkers **none** How are they protected **yes**

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 **Eng Room above lead line**

**BOILERS, &c.**—(Letter for record <sup>New York 6-6-18 (7)</sup>) Manufacturers of Steel **Illinois Steel Co & Ohio Steel Co**

Total Heating Surface of Boilers **7995**  $\frac{1}{2}$  Is Forced Draft fitted **yes** No. and Description of Boilers **3 Single Ended Scotch Marine**

Working Pressure **210 lbs** Tested by hydraulic pressure to **315 lbs** Date of test **9-8-18** No. of Certificate **48**

Can each boiler be worked separately **yes** Area of fire grate in each boiler **63**  $\frac{1}{2}$  No. and Description of Safety Valves to each boiler **2. 3 1/2" Dunkenheimer** Area of each valve **9.6** Pressure to which they are adjusted **210** Are they fitted with easing gear **yes**

Smallest distance between boilers or uptakes and bunkers or woodwork **14"** Mean dia. of boilers **14'-9"** Length **11ft** Material of shell plates **Steel**

Thickness **1 3/8"** Range of tensile strength **62720** Are the shell plates welded or flanged **no** Descrip. of riveting: cir. seams **double** long. seams **treble** Diameter of rivet holes in long. seams **1 7/16"** Pitch of rivets **9 1/2"** Lap of plates or width of butt straps **21 1/2"**

Per centages of strength of longitudinal joint rivets **88.0** Working pressure of shell by rules **219** Size of manhole in shell **12 x 16** plate **84.8**

Size of compensating ring **flanged** No. and Description of Furnaces in each boiler **3 Morrison** Material **Steel** Outside diameter **45 1/2"**

Length of plain part top **21** Thickness of plates crown **21** Description of longitudinal joint **Welded** No. of strengthening rings **13** bottom **32**

Working pressure of furnace by the rules **222** Combustion chamber plates: Material **Steel** Thickness: Sides **11/16"** Back **11/16"** Top **11/16"** Bottom **11/16"**

Pitch of stays to ditto: Sides **7 1/4 x 7 1/4"** Back **7 1/2 x 7 1/2"** Top **7 1/4 x 8 3/4"** If stays are fitted with nuts or riveted heads **Surface. Rived Corners Nutted** Working pressure by rules **214**

Material of stays **W. Iron** Area at smallest part **1.85** Area supported by each stay **56.18** Working pressure by rules **245** End plates in steam space: Material **Steel** Thickness **1 1/4"** Pitch of stays **17 1/2 x 18** How are stays secured **Double nutted** Working pressure by rules **222** Material of stays **Steel**

Area at smallest part **7.10** Area supported by each stay **315** Working pressure by rules **225** Material of Front plates at bottom **Steel**

Thickness **3/4"** Material of Lower back plate **Steel** Thickness **11/16"** Greatest pitch of stays **13"** Working pressure of plate by rules **278**

Diameter of tubes **2 3/4"** Pitch of tubes **3 13/16 x 3 3/4"** Material of tube plates **Steel** Thickness: Front **13/16"** Back **13/16"** Mean pitch of stay <sup>Tubes</sup> **7 5/8 x 11 1/4"**

Pitch across wide water spaces **13** Working pressures by rules **278** Girders to Chamber tops: Material **steel** Depth and thickness of girder at centre **Double 10 1/2 x 3 3/4"** Length as per rule **34"** Distance apart **8 3/4"** Number and pitch of stays, in each **3. 7 1/4"**

Working pressure by rules **221** Steam dome: description of joint to shell **yes** % of strength of joint **yes**

Diameter **13** Thickness of shell plates **11/16"** Material **Steel** Description of longitudinal joint **Welded** Diam. of rivet holes **11/16"**

Pitch of rivets **9 1/2"** Working pressure of shell by rules **219** Crown plates **yes** Thickness **11/16"** How stayed **yes**

**SUPERHEATER.** Type **Foster** Date of Approval of Plan **24-8-18** Tested by Hydraulic Pressure to **211 lbs**

Date of Test **24-8-18** Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler **yes**

Diameter of Safety Valve **1 1/2"** Pressure to which each is adjusted **211 lbs** Is Easing Gear fitted **yes**

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