

REC'D NEW YORK March 21 1918

Received at London Office

Date of writing Report

March 9 1918

When handed in at Local Office

March 9 1918

Port of Seattle, Wash. U.S.A.

No. in Survey held at

Seattle

Date, First Survey

January 25-1917

Last Survey February 5-1918

Reg. Book.

FIRST ENTRY in the

Steel Screw Steamer "SACRAMENTO" (Builder's No. 92)

Tons

Gross 4856.1

Net 3595.8

Master E. Cullen

Built at

Seattle

By whom built

Seattle Construction &amp; Dry Dock Co.

When built

1918

Engines made at

Seattle

By whom made

Seattle Construction &amp; Dry Dock Co.

when made

1918

Boilers made at

Seattle

By whom made

Seattle Construction &amp; Dry Dock Co.

when made

1918

Registered Horse Power

2800

Owners

U.S. Shipping Board Emergency Fleet Port belonging to Seattle

Nom. Horse Power as per Section 28

472

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

## ENGINES, &amp;c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

24-40-70

Length of Stroke

48

Revs. per minute

70

Dia. of Screw shaft

14-10

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

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

4-9

Dia. of Tunnel shaft

as per rule 12-67

as fitted 12-68

Dia. of Crank shaft journals

as per rule 13-30

as fitted 13-31

Dia. of Crank pin

13-35

Size of Crank webs

14-10

Dia. of thrust shaft under

collars

collars

13-35

Dia. of screw

17-0

Pitch of Screw

18-0

No. of Blades

4

State whether moveable

No

Total surface

98 sq

No. of Feed pumps

2

Diameter of ditto

7

Stroke

18

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

5

Stroke

20

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2 Duplex

Sizes of Pumps

Ballast 10" x 12" x 12"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

Two 3 1/2" - One 6"

In Holds, &amp;c. Hold No. 1 two 3 1/2". Hold No. 2, two 3 1/2"

Hold No. 3 two 3 1/2". Shaft tunnel one 3"

No. of Bilge Injections

1

sizes

10

Connected to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room &amp; size

Yes 6"

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

None

Are all connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Valves and Cocks

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

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 Platform at upper deck

## BOILERS, &amp;c.—(Letter for record Jan. 1917)

Manufacturers of Steel

North Bros. Co.

Total Heating Surface of Boilers

6831

Is Forced Draft fitted

Yes

No. and Description of Boilers

3 Single ended Scotch Marine

Working Pressure

190

Tested by hydraulic pressure to

285

Date of test

Aug. 29, Sep. 8, 1917

No. of Certificate

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

56.37 sq

No. and Description of Safety Valves to

each boiler

Two 3 1/2" spring loaded

Area of each valve

9.62

Pressure to which they are adjusted

190

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers

on woodwork 12

Mean dia. of boilers

13-10 5/16

Length

11-11 7/16

Material of shell plates

Steel

Thickness

1 5/16

Range of tensile strength

60,000

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Double

long. seams

Triple

Diameter of rivet holes in long. seams

1 5/16

Pitch of rivets

8 1/2

width of butt straps

11 1/2 x 18 1/4

Per centages of strength of longitudinal joint

rivets 82.46

plate 84.55

Working pressure of shell by rules

198

Size of manhole in shell

12" x 16"

Size of compensating ring

30" x 32"

No. and Description of Furnaces in each boiler

3 Morrison

Material

Steel

Outside diameter

46 1/8"

Length of plain part

top

bottom

Thickness of plates

crown 7/16

bottom 7/16

Description of longitudinal joint

welded

No. of strengthening rings

—

Working pressure of furnace by the rules

194

Combustion chamber plates: Material

Steel

Thickness: Sides

5/8

Back

5/8

Top

5/8

Bottom

Pitch of stays to ditto: Sides

6 x 6

Back

6 x 7 1/16

Top

7 1/2 x 7 1/2

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

224

Top

240

Sides

Material of stays

Steel

Area at smallest part

1.26

Area supported by each stay

39.4

Working pressure by rules

250

End plates in steam space:

Material

Steel

Thickness

1 5/32

Pitch of stays

17 1/2 x 17 1/2

How are stays secured

Double Nuts

Working pressure by rules

199

Material of stays

Area at smallest part

6.49

Area supported by each stay

300

Working pressure by rules

225

Material of Front plates at bottom

Steel

Thickness

3/4

Material of Lower back plate

Steel

Thickness

5/8

Greatest pitch of stays

12 5/16

Working pressure of plate by rules

375

Mean pitch of stays

9

Diameter of tubes

2 1/2

Pitch of tubes

3 5/8

Material of tube plates

Steel

Thickness: Front

3/4

Back

3/4

Mean pitch of stays

9

Pitch across wide water spaces

14 1/16

Working pressures by rules

234

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

10 3/4 x 12 3/4

Length as per rule

34

Distance apart

7 1/2

Number and pitch of stays in each

Three

7 1/2

Working pressure by rules

235

Steam dome: description of joint to shell

None

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

## SUPERHEATER. Type

None

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

00538-00551-0018

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

- 2 Connecting rod top end bolts & nuts ✓
- 2 Connecting rod bottom end bolts & nuts ✓
- 2 Main bearing bolts ✓
- 1 Set Coupling bolts for one coupling ✓
- 1 Set Feed pump valves ✓
- 1 Set Bilge pump valves ✓
- 1 Set Piston springs ✓
- 1 Propeller (cast iron)
- 20 Condenser tubes & ferrules and iron of various sizes ✓
- 6 Boiler tubes
- 2 Safety valve springs
- 100 Fire bars

The foregoing is a correct description,  
SEATTLE CONSTRUCTION AND DRY DOCK COMPANY

BY [Signature] SECRETARY

Manufacturer. March 9. 1918

Dates of Survey while building { During progress of work in shops -- 1917 Jan. 17-25-26-31 Feb. 3-8-13-16-24-27 March 3-5-6-26 April 28 May 12-23-28-29 Nov. 5-12 (21)  
During erection on board vessel -- Aug. 23-29 Sep. 4-8-13 Oct. 16-25 Nov. 5-12-21-28 Dec. 5-8-12-14-24-28 31 Jan. 4-7-18-23-24-30 Feb. 5 (25)  
Total No. of visits 46. Is the approved plan of main boiler forwarded herewith Copy

Dates of Examination of principal parts—Cylinders April 30 Slides May 4-18 Covers May 4-18 Pistons April 28 Rods March 3-26  
Connecting rods April 28 Crank shaft May 12-29 Thrust shaft Nov. 5 Tunnel shafts Nov. 5-12 Screw shaft Nov. 5-12 Propeller Nov. 5-12  
Stern tube Nov. 5-12 Steam pipes tested Dec. 5-14 Engine and boiler seatings Oct. 25 Engines holding down bolts Dec. 24  
Completion of pumping arrangements Dec. 24 Boilers fixed Dec. 14 Engines tried under steam Jan. 18 Feb. 1918  
Completion of fitting sea connections Nov. 5 Stern tube Nov. 12 Screw shaft and propeller Nov. 12-21  
Main boiler safety valves adjusted Feb. 5 Thickness of adjusting washers Std. 27-3/4 Center 7-5/8 Port 4-1  
Material of Crank shaft Steel Identification Mark on Do. 29-3-17 Material of Thrust shaft Steel Identification Mark on Do. 22-5-17  
Material of Tunnel shafts Steel Identification Marks on Do. 321 Material of Screw shafts Identification Marks on Do. 321  
Material of Steam Pipes Steel Test pressure 570  
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 "KEY WEST" - "STORVIKEN"

General Remarks (State quality of workmanship, opinions as to class, &c. The Engines and Boilers have been constructed and installed under special survey and in accordance with the approved plans together with auxiliaries, pipes, mountings and sea connections. The material and workmanship are both of good quality, on completion the machinery seen tried under steam and found satisfactory. The Machinery eligible, in my opinion, to have the record of + LMC 2-18 made in the Register Book in the case of this vessel.

It is submitted that this vessel is eligible for THE RECORD. + LMC 2-18. E.D.

The amount of Entry Fee ... \$ 73 : 05 :  
Special ... \$ 218 : 00 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) \$ 68 : 00 :  
When applied for, March 1918  
When received, March 1918

James Fowler  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York MAR 26 1918

Assigned + dmb 2.18  
Elc. Light

MACHINERY CERTIFICATE  
WRITTEN 9.4.18