

# REPORT ON MACHINERY.

No. 555

REC'D NEW YORK

Received at London Office

Survey Report January 2 1918 When handed in at Local Office Jan 14 1918 Port of Seattle Wash. U.S.A.

Survey held at Seattle Date, First Survey Sept 6<sup>th</sup> Last Survey Dec 20<sup>th</sup> 1917

On the Steel Screw Steamer "WEST HAVEN" (Builders Yard N<sup>o</sup> 10) (Number of Plates 30) Tons { Gross 5699.5 Net 4232.0

C. J. O'Brien Built at Seattle By whom built Skinner & Eddy Corporation When built 1917

Made at Seattle By whom made Puget Sound Machinery Depot when made 1917

Made at Seattle By whom made Commercial Boiler Works when made 1917

Ind Horse Power 2600 Owners U.S. Shipping Board Emergency Fleet Port belonging to Seattle

Ind Horse Power as per Section 28 549.2 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Cylinders 25"-42"-72" Length of stroke 48" Revs. per minute 80 Dia. of Screw shaft 14.4" as per rule 14.37" Material of Steel as fitted 14.4" screw shaft

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

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

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

are fitted, is the shaft lapped or protected between the liners — Length of stern bush 5 feet

Shaft 13.45" as per rule 13.45" Dia. of Crank shaft journals 14.14" as per rule 14.12" Dia. of Crank pin 14.4" Size of Crank webs 10" x 28" Dia. of thrust shaft under

14.4" Dia. of screw 16-9" Pitch of Screw 15'-0" No. of Blades 4 State whether moveable Yes Total surface 74 sq

Feed pumps 2 Diameter of ditto 8" Stroke 18" Can one be overhauled while the other is at work Yes

Bilge pumps 1 Duplex Diameter of ditto 5 3/4" Stroke 6" Can one be overhauled while the other is at work —

Donkey Engines 1 Duplex Sizes of Pumps 12" x 8 1/2" x 12" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Four-3 1/2" Boiler Room Four 3 1/2" In Holds, &c. N<sup>o</sup> 1 Two 3 1/2" N<sup>o</sup> 2 Two 3 1/2" N<sup>o</sup> 3 Four 3 1/2"

Shaft Tunnel — One 3 1/2" Large Injections 1 sizes 10" Connected to condenser to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"

Are 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

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

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

How are they protected Hood Casings 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

Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine Room platform

ES, &c.—(Letter for record New York Dec 11 1917) Manufacturers of Steel Lukens Iron & Steel Company

Heating Surface of Boilers 8055 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single ended Scotch Marine

Pressure 210 lbs Tested by hydraulic pressure to 315 lbs Date of test November 23 No. of Certificate —

Can boiler be worked separately Yes Area of fire grate in each boiler 65 sq No. and Description of Safety Valves to

each 2 Lukensheimers Area of each valve 9.6 Pressure to which they are adjusted 210 Are they fitted with easing gear Yes

Distance between boilers or uptakes and bunkers on woodwork 12" Mean dia. of boilers 15'-0 1/2" Length 11'-0" Material of shell plates Steel

1 1/2" Range of tensile strength 26 7/16 to 32 Tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double

are Triple Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" Top of plates on width of butt straps 22 3/8"

ages of strength of longitudinal joint 95 Working pressure of shell by rules 228 Size of manhole in shell 12" x 16"

to compensating ring Flanged No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 48 1/2"

plain part top Thickness of plates crown 2 1/32" Description of longitudinal joint Welded No. of strengthening rings —

pressure of furnace by the rules 222 Combustion chamber plates: Material Steel Thickness: Sides 1 1/2" Back 1 1/2" Top 1 1/2" Bottom 1 1/2"

stays to ditto: Sides 7" x 8" Back 7 1/4" x 7 1/4" Top 7" x 8" If stays are fitted with nuts or riveted heads 1 1/2" nuts Working pressure by rules 214

of stays Welded Area at smallest part 1 3/8" = 1.722 Area supported by each stay 56.25 Working pressure by rules 225 End plates in steam space:

Steel Thickness 1 1/4" Pitch of stays 16 3/8" x 18" How are stays secured Double Nuts Working pressure by rules 237 Material of stays Steel

smallest part 8.29 Area supported by each stay 294.7 Working pressure by rules 237 Material of Front plates at bottom Steel

1 1/2" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 12 Working pressure of plate by rules 350

of tubes 3 Pitch of tubes 4" x 4 1/8" Material of tube plates Steel Thickness: Front 1 1/2" Back 1 1/2" Mean pitch of stays 8 1/4" x 12

cross wide water spaces 13 Working pressures by rules 268 Girders to Chamber tops: Material Steel Depth and

of girder at centre 11" x 1 1/2" Length as per rule 34 Distance apart 8 Number and pitch of stays in each 4-7" centers

pressure by rules 292 Steam dome: description of joint to shell None % of strength of joint —

Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet holes —

Rivets — Working pressure of shell by rules — Crown plates — Thickness — How stayed at Buffalo NY

HEATER. Type 3 Water Date of Approval of Plan — Tested by Hydraulic Pressure to 630 lbs

Total No. of 8-10-17 FWT Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Safety Valve 1 1/2" Pressure to which each is adjusted 211 lbs Is Easing Gear fitted Yes

W1128-0055



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 Connecting rod top end bolts and nuts ✓  
2 Connecting rod bottom end bolts and nuts ✓  
2 main bearing bolts ✓  
1 Set coupling bolts ✓  
1 Set feed pump valves ✓  
1 Tail shaft ✓  
1 Propeller blade ✓  
40 Condenser tubes & ferrules ✓  
20 Boiler tubes ✓  
Assorted bolts, nuts and iron of various sizes ✓

ELECTRIC GEAR

1 Armature,  
1 Main field coil,  
2 Set Brushes,  
1 " Brush holder,  
1 " main bearings,  
1 " Crank pin brasses,  
1 " Thrust pin brasses,  
1 " Piston rings,  
1 Piston rod and nut,  
1 Piston valve,  
1 Valve stem with nut,  
1 Governor spring.

The foregoing is a correct description,

Skinner & Eddy Corporation  
by C. M. McCallum

Manufacturer, Boilers

Commercial Boiler  
J. H. Jof

Dates of Survey while building { During progress of work in shops -- Sep. 6-10-14-17-19-22 Oct. 2-11-17-25-27 Nov. 1-9-13-17-23 (16)  
During erection on board vessel --- Oct. 17-25-27 Nov. 1-8-13-23-26-30 Dec. 2-6-8-14-20 (14)  
Total No. of visits 30

Is the approved plan of main boiler forwarded herewith Copy  
" " " donkey " " "

Dates of Examination of principal parts—Cylinders Sep 6-14-17-19 Slides Sep 22 Oct 27 Covers Sep 6-19 Pistons Oct 2-25 Rods Oct 2-  
Connecting rods Oct 2-27 Crank shaft Oct 2 Nov 1 Thrust shaft Oct 11 27 Tunnel shafts Nov 1-23 Screw shaft Oct 17-27 Propeller Oct.  
Stern tube Oct. 17-27 Steam pipes tested Dec. 14 Engine and boiler seatings Nov. 1-26 Engines holding down bolts Dec. 6  
Completion of pumping arrangements Dec 20 Boilers fixed Nov. 30 Engines tried under steam Dec 20  
Completion of fitting sea connections Oct 25 Stern tube Oct 27 Screw shaft and propeller Oct 27 - Nov.  
Main boiler safety valves adjusted Dec 20 Thickness of adjusting washers S. 664-666. C. 553-669. F. 600-606  
Material of Crank shaft Steel Identification Mark on Do. 1-11-17 7F Material of Thrust shaft Steel Identification Mark on Do. 29-31  
Material of Tunnel shafts Steel Identification Marks on Do. 229-1256 1256 Material of Screw shafts Steel Identification Marks on Do. 1235  
Material of Steam Pipes Steel Test pressure 630 lbs

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 No If so, state name of vessel

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

The Engines and Boilers have been built and installed under special survey and in accordance with the approved plans together with all auxiliaries, pipes and fittings. The materials and workmanship are both of good quality.

The Boilers tested by hydraulic pressure to 315 lbs and found sound and tight.

On completion the machinery seen tried under steam and found to be satisfactory.

The machinery eligible, in my opinion, to have the record of +LMC 12.17 made in the Register Book, and fitted for oil fuel 12.17. F.P. above 150°F in the case of the vessel.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 12.17.

Fitted for oil fuel 12.17. F.P. above 150°F.

The amount of Entry Fee ... \$ 73 : 05 :  
Special ... \$ 231 : 10 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) \$ 53 : 60 :  
When applied for, January 10, 1918  
When received, 19

Committee's Minute New York JAN 29 1918

Assigned

+ LMC 12.17

Fitted for oil fuel 12.17 F.P. above 150°F

James Fowler  
Engineer Surveyor to Lloyd's Register of Shipping

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

MACHINERY CERTIFICATE  
WRITTEN 23-2-18

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Foundation