

# REPORT ON MACHINERY.

Received at London Office

Date of writing Report Nov 30<sup>th</sup> 1918 When handed in at Local Office Dec. 4<sup>th</sup> 1918 Port of Seattle Wash USA

No. in Survey held at Seattle Date, First Survey August 10<sup>th</sup> Last Survey Nov. 2<sup>nd</sup> 1918

Reg. Book. Seattle (Number of Visits 20)

FIRST ENTRY on the New Steel Screw Steamer "WEST POOL" (Builder's No. 20) Tons { Gross 5724 Net 3520 When built 1918

Master J. F. Dutrie & Co. Built at Seattle By whom built J. F. Dutrie & Co. when made 1918

Engines made at Los Angeles, Cal. By whom made Llewellyn Iron Works when made 1918

Boilers made at Seattle By whom made Commercial Boiler Works when made 1918

Registered Horse Power 2800 Owners WS Shipping Board Emergency Fleet Corp belonging to Seattle

Nom. Horse Power as per Section 28 465 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

## ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 24 1/2 - 41 1/2 - 72 Length of Stroke 48 Revs. per minute 88 Dia. of Screw shaft 14 3/8 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 —

If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 4'-11"

Dia. of Tunnel shaft 13 3/32 Dia. of Crank shaft journals 13-98 Dia. of Crank pin 14 3/8 Size of Crank webs 52 3/4 x 29 3/4 Dia. of thrust shaft under collars 13 3/32 Dia. of screw 16'-6" Pitch of Screw 16'-6" No. of Blades 4 State whether moceable yes Total surface 68.4 sq ft

No. of Feed pumps 2 Diameter of ditto 14 x 9 Stroke 16 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 6 Stroke 21 Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Duplex Sizes of Pumps Free Bilge 12 x 10 1/2 x 16 Ballast 10 x 14 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 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 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 above load line

## BOILERS, &c.—(Letter for record New York May 11 1918 Manufacturers of Steel Illinois Steel Co)

Total Heating Surface of Boilers 9217.8 Is Forced Draft fitted yes No. and Description of Boilers 3 Single ended Scotch Marine

Working Pressure 210 Tested by hydraulic pressure to 315 Date of test Sept 13 No. of Certificate —

Can each boiler be worked separately yes Area of fire grate in each boiler 63 sq ft No. and Description of Safety Valves to each boiler 2-3 1/2" Lunkenshimer 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 14 Mean dia. of boilers 15'-7 1/2" Length 11'-0" Material of shell plates Steel

Thickness 1 1/2 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 7/16 Pitch of rivets 10 5/8 width of butt straps 22 5/8

Per centages of strength of longitudinal joint rivets 93.87 Working pressure of shell by rules 210.5 Size of manhole in shell 12" x 16" plate 84.57

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 narrow Material Steel Outside diameter 50 5/16

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

Working pressure of furnace by the rules 212.7 Combustion chamber plates: Material Steel Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 3/8

Pitch of stays to ditto: Sides 7 1/2 x 7 1/2 Back 7 1/4 x 7 1/2 Top 8 5/8 x 8 5/8 If stays are fitted with nuts or riveted heads Riveted Working pressure by rules 216

Material of stays Wiron Area at smallest part 1.77 Area supported by each stay 59.37 Working pressure by rules 223.5 End plates in steam space:

Material Steel Thickness 1 1/4 Pitch of stays 18 x 18 How are stays secured Double Nuts Working pressure by rules 216 Material of stays Steel

Area at smallest part 8.9 Area supported by each stay 324 Working pressure by rules 216 Material of Front plates at bottom Steel

Thickness 13/16 Material of Lower back plate Steel Thickness 1/16 Greatest pitch of stays 13 1/2 Working pressure of plate by rules 225

Diameter of tubes 2 3/4 Pitch of tubes 3 3/8 x 3 3/4 Material of tube plates Steel Thickness: Front 13/16 Back 13/16 Mean pitch of stays 7 1/2 x 11 1/4

Pitch across wide water spaces 13 1/2 Working pressures by rules 235 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10 x 12 Length as per rule 34 Distance apart 8 5/8 Number and pitch of stays in each 3-8 5/8

Working pressure by rules 215 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 —

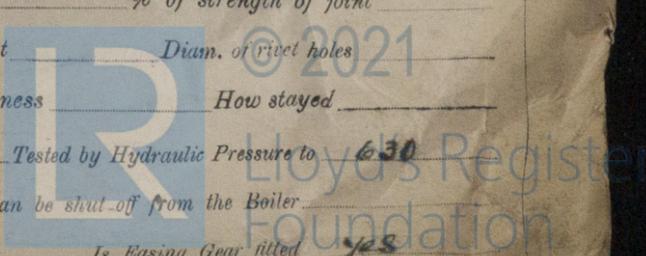
Pitch of rivets — Working pressure of shell by rules — Crown plates — Thickness — How stayed —

## SUPERHEATER. Type Foster Date of Approval of Plan — Tested by Hydraulic Pressure to 630

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 Valve 1 1/2 Pressure to which each is adjusted 211 Is Easing Gear fitted yes

W136-0037



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

- 1 Set Crank pin Brasses
- 1 Crosshead Brasses
- 2 main bearing bolts and nuts
- 1 H.P. Valve stem
- 1 H.P. valve top ring
- 1 " " Bottom ring
- 2 Rings for each, H.P. I.P. & L.P. pistons
- 24 Springs for I.P. piston
- 25 " " L.P. " "
- 6 Coupling bolts for Crank shaft
- 5 " " Line shafts
- 6 Air pump delivery valve spacers

- 1 Set Feed pump valves
- 1 " " " "
- 1 Tail shaft complete
- 2 Thrust shoes
- 2 Propeller blades
- 40 Condenser tubes and ferrules
- 24 Boiler tubes
- 1 Set Fire bars and furnace ports & baffle plates
- A number of spare parts for Auxiliaries
- A number of studs and nuts for parts main engine
- A quantity of assorted bolts, nuts & washers of various sizes.

The foregoing is a correct description,

C.O. Bretherton - Chief Engineer for Builders.

Manufacturer.

Dates of Survey while building: During progress of work in shops -- Aug 10-15-19-20-21-22-28. Sep. 3-18-19-26-28 (2)  
 During erection on board vessel --- Oct 3-21-22-25-28-30 Nov. 1-2 (8)  
 Total No. of visits 20 Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders — Slides — Covers — Pistons — Rods —  
 Connecting rods — Crank shaft — Thrust shaft — Tunnel shafts Sep 18-26 Screw shaft Aug 22 Propeller Sep 3  
 Stern tube Aug 22 Steam pipes tested Oct 28 Engine and boiler seatings Oct 21 Engines holding down bolts Oct 25  
 Completion of pumping arrangements Oct 25 Boilers fixed Oct 3 Engines tried under steam Nov. 2  
 Completion of fitting sea connections Sep 18 Stern tube Sep. 18 Screw shaft and propeller Sep 19  
 Main boiler safety valves adjusted Nov. 1 Thickness of adjusting washers P  $\frac{1}{16}$  -  $\frac{25}{32}$  . C  $\frac{3}{4}$  -  $\frac{1}{16}$  . S  $\frac{13}{16}$  -  $\frac{21}{32}$   
 Material of Crank shaft Steel Identification Mark on Do. Material of Thrust shaft Steel Identification Mark on Do. 5-7-18  
 Material of Tunnel shafts Steel Identification Marks on Do. 189-26-7-18 Material of Screw shafts Steel Identification Marks on Do. 175  
 Material of Steam Pipes Steel 189-31-7-18 Test pressure 630V  
 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 No If so, state name of vessel

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

The Boilers and Shafting together with Auxiliaries, pipes, mountings and sea connections constructed and installed under special survey in accordance with the approved plans, and the material tested to the requirements of the Society.

The Engines installed under special survey and seen tried under steam to my satisfaction.

NOTE "A set of Turbine Engines built under our classification survey were to be installed on this vessel but, owing to late delivery, the US Shipping Board & Emergency Fleet Corporation canceled the Turbines and substituted a set of triple expansion reciprocating engines built by the Llewellyn Iron Works, Los Angeles, Cal. under survey and to the requirements of the American Bureau of Shipping whose certificates of inspection are herewith enclosed.

The machinery eligible, in my opinion, to have the record of + BS + MS. 10. 18 without the distinctive mark +. It is submitted that this vessel is eligible for THE RECORD. LMC II-18 FD

The amount of Entry Fee ... \$ 15 : 00 :  
 . Spec ... \$ 227 : 45 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ ✓ : :

When applied for, Dec 5<sup>th</sup> 1918

When received, 13/11/19

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

Committee's Minute

New York DEC 17 1918

Assigned

# LMC. 11. 18.

MACHINERY CERTIFICATE WRITTEN 31-12-18



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