

Rpt. 4.

REPORT ON MACHINERY.

No. 444

TUE. 31 DEC. 1918

Date of writing Report Nov 30th 1918 When handed in at Local Office Dec. 4th 1918 Port of Seattle Wash USANo. in Survey held at Seattle
Reg. Book.Date, First Survey August 10th Last Survey Nov. 2nd 1918FIRST ENTRY on the New Steel Screw Steamer "WEST POOL" (Builder's No. 20)(Number of Visits 20)Master ✓ Built at Seattle By whom built J. F. Dutchie & Co.Tons { Gross 5724
Net 3520
When built 1918Engines made at Los Angeles, Cal. By whom made Llewellyn Iron Works when made 1918Boilers made at Seattle By whom made Commercial Boiler Works when made 1918Registered Horse Power 2800 Owners US Shipping Board Emergency Fleet Corp belonging to SeattleNom. Horse Power as per Section 28 465 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yesENGINES, &c.—Description of Engines Triple ExpansionNo. of Cylinders 3 No. of Cranks 3Dia. 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 Steel
as per rule 13.315 as fitted 14 1/2 screw shaft)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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If twoliners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 4'-11"Dia. of Tunnel shaft 13 3/32 as per rule 13.315 Dia. of Crank shaft journals 13 3/32 as per rule 13.98 Dia. of Crank pin 14 3/8 Size of Crank webs 52 1/2 x 29 3/4 Dia. of thrust shaft undercollars 13 3/32 Dia. of screw 16'-6" Pitch of Screw 16'-6" No. of Blades 4 State whether moveable yes Total surface 68.4 sq ftNo. of Feed pumps 2 Diameter of ditto 14 x 9 Stroke 16" Can one be overhauled while the other is at work yesNo. of Bilge pumps 2 Diameter of ditto 6" Stroke 21" Can one be overhauled while the other is at work yesNo. of Donkey Engines 2 Duplex Sizes of Pumps Free Bilge 12 x 10 1/2 x 16" No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 4-3 1/2" Boiler Room 2-3 1/2" In Holds, &c. Nº 1-2-3 1/2" Nº 2-2-3 1/2" Nº 3-2-3 1/2"Nº 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 — circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 2-2 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 NoneAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Valves and CocksAre 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 belowAre 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 yesWhat 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 yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesIs the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Engine Room above load lineBOILERS, &c.—(Letter for record 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 MarineWorking 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 toeach boiler 2-3 1/2" Lunkhuimer Area of each valve 9.6 Pressure to which they are adjusted 210 Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers 14 Mean dia. of boilers 15'-7 1/2" Length 11'-0" Material of shell plates SteelThickness 1 1/2" Range of tensile strength 60,000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Doublelong. seams Triple Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 10 1/8" width of butt straps 22 1/2"Per centages of strength of longitudinal joint 93.87 Working pressure of shell by rules 210.5 Size of manhole in shell 12" x 16"Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 50 1/16"Length of plain part top 31" Thickness of plates 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 1/2 x 8 1/2" If stays are fitted with nuts or riveted heads Riveted Working pressure by rules 216Material of stays Morrison Area at smallest part 1.77 Area supported by each stay 59.37 Working pressure by rules 213.5 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 SteelArea at smallest part 8.9 Area supported by each stay 324 Working pressure by rules 216 Material of Front plates at bottom SteelThickness 13/16" Material of Lower back plate Steel Thickness 1/16" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 225Diameter 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 andthickness 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 jointDiameter — 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 630Date 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

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
- 28 " " L.P. "
- 6 Coupling bolts for Crank shaft
- 8 " " " " " " " " " "
- 6 Air pump delivery valve spacers

- 1 Set Feed pump valves
- 1 " " " "
- 1 " " " "
- 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 - Ref. 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. 189-30-7-18 LN 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. 5-7-18
 Material of Steam Pipes Steel 189-31-7-18 " Test pressure 630 V
 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 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 U.S. 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 **+**. Made in the Register Book in the case of this vessel.

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 5th 1918
 When received, 13/11/19

Committee's Minute

New York DEC 17 1918

Assigned

LMC II. 18.

MACHINERY CERTIFICATE WRITTEN 31-12-18

J.W. 4.2
 8/1/19
 James Fowler
 Engineer Surveyor to Lloyd's Register of Shipping



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