

REPORT ON MACHINERY.

REC'D NEW YORK April 11-1918

Received at London Office

Date of writing Report April 8th 1918 When handed in at Local Office April 8th 1918 Port of Detroit Mich.

No. in Survey held at Detroit Mich. Date, First Survey Oct 30 1917. Last Survey Mar 30 1918.

Reg. Book. on the Steel Screw Steamer "Lake Weston" (Number of Visits)

Master Built at Wyandotte Mich By whom built Detroit Shipbuilding Co. When built 1918.

Engines made at Detroit Mich By whom made Detroit Shipbuilding Co. (No 218) when made 1918

Boilers made at Detroit Mich By whom made Detroit Shipbuilding Co. (No 218) when made 1918.

Registered Horse Power Owners U.S. Shipping Board Emergency Fleet Corp belonging to Detroit Mich.

Nom. Horse Power as per Section 28 274 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 20 x 36 x 54 Length of Stroke 40 Revs. per minute 80 Dia. of Screw shaft as per rule 11.37. Material of screw shaft as fitted 11 7/16 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 51

Dia. of Tunnel shaft as per rule 10.3. Dia. of Crank shaft journals as per rule 10.81. Dia. of Crank pin 11. Size of Crank webs 21 x 7 Dia. of thrust shaft under collars 11. Dia. of screw 13.3 Pitch of Screw 13.6 No. of Blades 4 State whether moveable No Total surface 53

No. of Feed pumps 2. Diameter of ditto 10 x 7 x 12 Stroke Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2. Diameter of ditto 3 1/2 Stroke 20 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps 12 x 8 1/2 x 12 = 10 x 12 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two 3" dia

In Holds, &c. No 1 & 2. Holds divided by W.T. Bhead, fitted with Sluice Valves (Gate Valves - 1 each side of hold 4" dia) with rods led to decks: 2-3" in No 1 hold: 1-5" No 4 hold. 1-5" in turner

No. of Bilge Injections 1 size 6" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 3"

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 Both

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 Above

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 upper deck

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Carnegie Steel Co.

Total Heating Surface of Boilers 5246 Is Forced Draft fitted No No. and Description of Boilers Two Multitubular S.E.

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test Feb. 26-27-1918 No. of Certificate 108 + 109

Can each boiler be worked separately Yes Area of fire grate in each boiler 63 # No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 7.06 Pressure to which they are adjusted 185. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 14'-6" Length 11-2 3/4 Material of shell plates Steel

Thickness 1/4 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. S. R.

long. seams T. R. B. S. Diameter of rivet holes in long. seams 1 7/16 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 19 3/4

Per centages of strength of longitudinal joint rivets 94.7. Working pressure of shell by rules 192 lbs Size of manhole in shell 15 x 11

Size of compensating ring 33 x 33 x 1/4 No. and Description of Furnaces in each boiler Two Corrugated Material Steel Outside diameter 46

Length of plain part top Thickness of plates crown 5/8 Description of longitudinal joint Weld No. of strengthening rings Two

Working pressure of furnace by the rules 192 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 5/8

Pitch of stays to ditto: Sides 7 7/8 x 7 7/8 Back 7 7/8 x 7 7/8 Top 8 x 7 1/2 If stays are fitted with nuts or riveted heads R. H. Working pressure by rules 181

Material of stays Steel Area at smallest part 1.26 Area supported by each stay 55 Working pressure by rules 182. End plates in steam space:

Material Steel Thickness 1 3/32 Pitch of stays 17 x 15 1/4 How are stays secured D. Nuts. Working pressure by rules 199 Material of stays Steel

Area at smallest part 5.41 Area supported by each stay 266 Working pressure by rules 210 Material of Front plates at bottom Steel

Thickness 1 3/16 Material of Lower back plate Steel Thickness 3/4 Greatest pitch of stays 12 1/2 x 6 1/2 Working pressure of plate by rules 266

Diameter of tubes 3/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 10 7/16

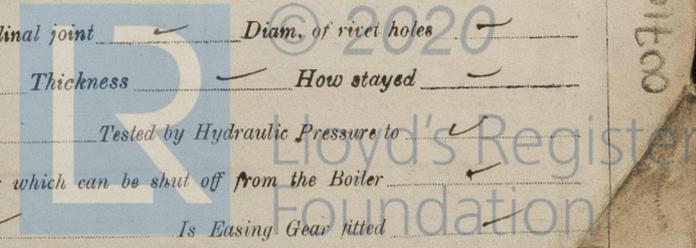
Pitch across wide water spaces 16 3/4 all Working pressures by rules 183 lbs. Girders to Chamber tops: Material A. Depth and thickness of girder at centre 8 7/8 x 1/2 Length as per rule 30 Distance apart 8 Number and pitch of stays in each Three 7 1/2

Working pressure by rules 240. Steam dome: description of joint to shell % of strength of joint

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

If not, state whether, and when, one will be sent

100100 - 007115 - 0028



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied :- 1 set each of Top & Bottom and main bearing and coupling bolts, 1 set each of Fed. Valves and Air Pump Valves, 25 Condenser tubes, 12 ferrules, 12 Boiler tubes, 1 C.I. Propeller, 1 set Coach Springs for L & I.P. Pistons, assorted nuts bolts & Iron

The foregoing is a correct description,

H. Small Asst. Gen. Supt.

Manufacturer.

Dates of Survey while building: During progress of work in shops -- Oct. 31, 1917; During erection on board vessel --- MAR. 5-11-26-27-30; Total No. of visits 33.

Is the approved plan of main boiler forwarded herewith Yes.

Is the approved plan of donkey boiler forwarded herewith Yes.

Dates of Examination of principal parts: Cylinders 15-2-18, Slides 15-2-18, Covers 11-2-18, Pistons 11-2-18, Rods 7-2-18, Connecting rods 17-1-18, Crank shaft 7-2-18, Thrust shaft 17-1-18, Tunnel shafts 31-10-17, Screw shaft 24-1-18, Propeller 7-2-18, Stern tube 15-2-18, Steam pipes tested 22-3-18, Engine and boiler seatings 15-2-18, Engines holding down bolts 19-3-18.

Completion of pumping arrangements 27-3-18, Boilers fixed 19-3-18, Engines tried under steam 27-3-18.

Completion of fitting sea connections 19-3-18, Stern tube 19-3-18, Screw shaft and propeller 19-3-18.

Main boiler safety valves adjusted 27-3-18, Thickness of adjusting washers PORT 5/16" AFT 3/32" STARD. FOR 2/32" AFT.

Material of Crank shaft Steel, Identification Mark on Do. 3-18, J.F.R. Material of Thrust shaft Steel, Identification Mark on Do. 3-18, J.F.R.

Material of Tunnel shafts Steel, Identification Marks on Do. 3-18, J.F.R. Material of Screw shafts Steel, Identification Marks on Do. 3-18, J.F.R.

Material of Steam Pipes Seamless Steel, Test pressure 540 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

Is this machinery duplicate of a previous case Yes, If so, state name of vessel "Lake Arthur"

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines & Boilers have been built under special survey, and in accordance with the Rules. The materials and workmanship are sound and good. They have been fitted on board in an efficient manner, tried under steam and found satisfactory.

They are eligible in my opinion to be classed in the Register Book with the record of L.M.C. 3. 18.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3. 18.

Handwritten signature and date 14/5/18.

Handwritten signature.

The amount of Entry Fee \$ 10 : 00 : Special \$ 170 : 00 : Donkey Boiler Fee £ : : Travelling Expenses (if any) \$ 1 : 90 :

Jos. J. Rawlinson, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York APR 16 1918

Assigned

+ dmc 3. 18

Elec. light

MACHINERY CERTIFICATE WRITTEN 10-5-18



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