

Rpt. 4.

REPORT ON MACHINERY.

No. 108

REC'D NEW YORK

October 20 1917

Received at London Office

THU. NOV. 15 1917.

Date of writing Report 8 Oct 1917 When handed in at Local Office

Port of CLEVELAND, OHIO.

No. in Survey held at CLEVELAND, OHIO.

Date, First Survey 1. May 1917. Last Survey 6. Oct. 1917

Reg. Book. on the S.S. WAR PENGUIN

Master Built at Cleveland, O. By whom built The American Shipbuilding Co. No 467. Tons Gross Net

Engines made at Cleveland, O. By whom made The American Shipbuilding Co. No 467. When built 1917. 10

Boilers made at Cleveland, O. By whom made The American Shipbuilding Co. No 467. when made 1917. 10

Registered Horse Power Owners U.S. Shipping Board Emergency Fleet Corporation Port belonging to Washington

Nom. Horse Power as per Section 28 274 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

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

Dia. of Cylinders 20" . 33" . 54" Length of Stroke 40" Revs. per minute 85 Dia. of Screw shaft as per rule 11.22" Material of screw shaft S

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 No 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 51"

Dia. of Tunnel shaft as per rule 10.3" Dia. of Crank shaft journals as per rule 10.8" Dia. of Crank pin 11" Size of Crank webs 21x7" Dia. of thrust shaft under

collars 11 1/2" Dia. of screw 13-3" Pitch of Screw 12-6" No. of Blades 4 State whether moccable No Total surface 53 sq ft

No. of Feed pumps 2 Diameter of ditto 0x7" Stroke 12" 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 10x12x12" x 12x8x12" and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4-3" Bore 1-2 1/2" Bore Tunnel In Holds, &c. Forward Hold 2-3" Bore

apt hold 3-3" Bore

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

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

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 Top Platform.

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

Total Heating Surface of Boilers 5246 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Two, Cyl. Single end

Working Pressure 180 lbs Tested by hydraulic pressure to 270 lbs. Date of test 25.8.17 No. of Certificate 90

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 Two Spring Area of each valve 7.07 sq ft Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes

Smallest distance between boilers on uptakes and bunkers or woodwork 6" Int. dia. of boilers 14-6" Length 1-2 1/2" Material of shell plates S

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

Long. seams DBS/TR 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"

Percentage of strength of longitudinal joint rivets 94.7% plate 84.6% Working pressure of shell by rules 192 lbs Size of manhole in shell 15" x 11"

Size of compensating ring 33" x 33" No. and Description of Furnaces in each boiler 3. Morrison Material S. Outside diameter 46"

Length of plain part top bottom Thickness of plates crown bottom 5/8" Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 219 lbs Combustion chamber plates: Material S. Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 7 7/16" Back 7 7/16" Top 8 x 7/16" If stays are fitted with nuts or riveted heads nut rivets Working pressure by rules 181 lbs

Material of stays S. Area at smallest part 1.26 sq ft Area supported by each stay 55.3 sq ft Working pressure by rules 182 lbs End plates in steam space:

Material S. Thickness 1 3/32" Pitch of stays 17 x 15 3/4" How are stays secured DN. Working pressure by rules 199 lbs Material of stays S.

Area at smallest part 5.41 sq ft Area supported by each stay 268 sq ft Working pressure by rules 210 lbs Material of Front plates at bottom S.

Thickness 1 3/16" Material of Lower back plate S. Thickness 5/8" + 1/2" D.L.G. Greatest pitch of stays 12 1/2 x 6 1/2 Working pressure of plate by rules 266 lbs

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

Pitch across wide water spaces 13 3/4" Working pressures by rules 183 lbs Girders to Chamber tops: Material S. Depth and

Thickness of girder at centre 8 7/8" x 1 1/2" Length as per rule 30" Distance apart 8" Number and pitch of stays in each 3 @ 7 1/2"

Working pressure by rules 220 lbs 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

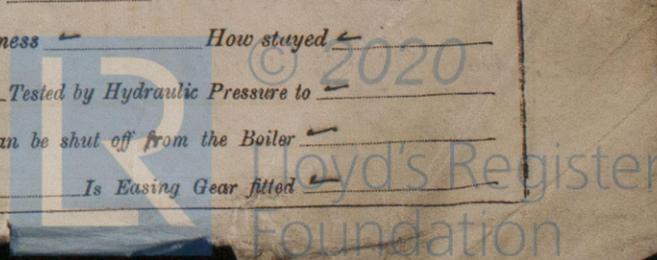
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

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

Number of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

1420-9601M



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *-*

SPARE GEAR. State the articles supplied:—

Two top end bolts and nuts, two bottom end bolts, two main bearing bolts, set of coupling bolts, set of piston springs, set of air, feed end bridge pump valves, one propeller.

The foregoing is a correct description,

The American Ship Builders Manufacturer.

1917
Dates of Survey while building: During progress of work in shops - May 8, 11, 14, 17, 24, Jun. 1, 5, 11, 15, 20, 25, 27, 30, Jul. 2, 9, 17, 18, 23, 25, 31, Aug. 2, 3, 7, 9, 13, 16, 17, 20, 24, 25, 27.
During erection on board vessel - Aug 31, Sep 5, 9, 14, 18, 26 Oct 1, 6, 6.
Total No. of visits *41*

Is the approved plan of main boiler forwarded herewith? *no*

Is the approved plan of donkey boiler forwarded herewith? *-*

Dates of Examination of principal parts—Cylinders *25.7.17* Slides *25.7.17* Covers *25.7.17* Pistons *2.8.17* Rods *2.8.17*
Connecting rods *25.7.17* Crank shaft *18.7.17* Thrust shaft *18.7.17* Tunnel shafts *8.8.17* Screw shaft *25.8.17* Propeller *28.8.17*
Stern tube *20.8.17* Steam pipes tested *26.9.17* Engine and boiler seatings *9.8.17* Engines holding down bolts *14.9.17*
Completion of pumping arrangements *1.10.17* Boilers fixed *8.9.17* Engines tried under steam *1.10.17*
Completion of fitting sea connections *28.8.17* Stern tube *28.8.17* Screw shaft and propeller *31.8.17*
Main boiler safety valves adjusted *1.10.17* Thickness of adjusting washers *Lock nut fitted.*

Material of Crank shaft *O.H.S.* Identification Mark on Do. *467 220405. 12.1917* Material of Thrust shaft *O.H.S.* Identification Mark on Do. *467 220405. 12.1917*
Material of Tunnel shafts *O.H.S.* Identification Marks on Do. *467 220405. 12.1917* Material of Screw shafts *O.H.S.* Identification Marks on Do. *467 220405. 12.1917*

Material of Steam Pipes *Steel* ✓ Test pressure *540 lb* ✓

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 *Engine 466. S/S. KIOVA*

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

The above machinery has been constructed under Special Survey. The materials and workmanship employed in its manufacture are sound and good. It has been fitted on board the vessel in a satisfactory manner and proved satisfactory under steam. The vessel is eligible, in my opinion, to have record + L.C. 10.17

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10.17.

JWD 20/11/17

The amount of Entry Fee ... £ 10 : 00 :
Special Forgings ... £ 168 : 00 :
Donkey Boiler Fee ... £ 45 : 00 :
Travelling Expenses (if any) £ - : - :
When applied for, 19
When received, 25/11/17

W. Lane
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York OCT 23 1917

Assigned + L.M.C. 10.17



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