

## REPORT ON MACHINERY.

No. 3307

NEW YORK June 21, 1919. Received at London Office June 21, 1919.

Date of writing Report 17<sup>th</sup> June 1919 When written in at Local Office 17<sup>th</sup> June 1919 Port of Philadelphia Pa

No. in Survey held at Camden N. J. Date, First Survey 8<sup>th</sup> May 1917 Last Survey 14<sup>th</sup> June 1919

Reg. Book. on the S. S. "Santa Plisa"

Master N. Proctor Built at Camden By whom built New York P. B. Corp (No 197) Tons Gross 5281 Net 3083

Engines made at Camden By whom made New York P. B. Corp (No 197) When built 1919

Boilers made at Do By whom made Do when made 1919

Registered Horse Power Owners United States Shipping Board Port belonging to Camden N. J.

Nom. Horse Power as per Section 28 663 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4

Dia. of Cylinders 25 $\frac{1}{2}$ , 38 $\frac{1}{2}$ , 55 $\frac{1}{2}$ , 81 Length of Stroke 54 Revs. per minute 75 Dia. of Screw shaft as per rule 15 $\frac{1}{4}$  Material of 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 6' 0"

Dia. of Tunnel shaft as per rule 14 $\frac{1}{4}$  Dia. of Crank shaft journals as per rule 15 $\frac{1}{2}$  Dia. of Crank pin 15 $\frac{3}{4}$  Size of Crank webs 10 $\frac{1}{2}$  Dia. of thrust shaft under

collars 15 $\frac{1}{2}$  Dia. of screw 17 $\frac{1}{2}$  Pitch of Screw 19 $\frac{1}{2}$  No. of Blades 4 State whether moveable Yes Total surface 104.88 sq

No. of Feed pumps 2 Diameter of ditto 12 $\times$ 8 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 $\times$ 2 Stroke 26 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 12 Sizes of Pumps per other side No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 B/L Rm 4-3 $\frac{1}{2}$ :2-3:3-2 $\frac{1}{2}$  In Holds, &c. N<sup>o</sup> 1-2-3 $\frac{1}{2}$ :N<sup>o</sup> 2-2-3 $\frac{1}{2}$  & 2-2 $\frac{1}{2}$  oil fuel & water way

1-3 $\frac{1}{2}$  Tunnel well N<sup>o</sup> 3-2-3 $\frac{1}{2}$ :N<sup>o</sup> 4-2-3 $\frac{1}{2}$

No. of Bilge Injections 1 sizes 10 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes-3 $\frac{1}{2}$

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 Yes

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 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 Yes

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 S. R. top platform

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

Total Heating Surface of Boilers 8953 Is Forced Draft fitted Yes No. and Description of Boilers 4 Single Ended

Working Pressure 220 lbs Tested by hydraulic pressure to 330 lbs Date of test 26-10-18 No. of Certificate 246

Can each boiler be worked separately Yes Area of fire grate in each boiler 53.6 sq No. and Description of Safety Valves to

each boiler Double spring loaded Area of each valve 9.62 Pressure to which they are adjusted 220 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork all 12 Mean dia. of boilers 14 $\frac{1}{8}$  Length 11 $\frac{1}{8}$  Material of shell plates Steel

Thickness 1 $\frac{1}{16}$  Range of tensile strength 60 to 71680 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. Riv.

Long. seams T. R. D. B. S. Diameter of rivet holes in long. seams 1 $\frac{9}{16}$  Pitch of rivets 9 $\frac{15}{16}$  Lap of plates or width of butt straps 22 $\frac{3}{4}$

Per centages of strength of longitudinal joint rivets 84.6 Working pressure of shell by rules 238 Size of manhole in shell 16 $\times$ 12

Size of compensating ring 36 $\frac{1}{2}$  $\times$ 32 $\frac{1}{2}$  $\times$ 116 No. and Description of Furnaces in each boiler 3 Corrugated Material Steel Outside diameter 3 $\frac{7}{32}$

Length of plain part top 11 Thickness of plates crown 11 Description of longitudinal joint Weld No. of strengthening rings 1

bottom 6 $\frac{1}{4}$  Working pressure of furnace by the rules 239 Combustion chamber plates: Material Steel Thickness: Sides 3 $\frac{1}{4}$  Back 3 $\frac{1}{4}$  Top 3 $\frac{1}{4}$  Bottom 3 $\frac{1}{4}$  A. B.

Pitch of stays to ditto: Sides 7 $\times$ 7 Back 7 $\times$ 7 $\frac{1}{2}$  Top 7 $\times$ 7 $\frac{1}{2}$  If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 345

Material of stays Steel Area at smallest part 1.99 Area supported by each stay 56.25 Working pressure by rules 319 End plates in steam space:

Material Steel Thickness 1 $\frac{1}{16}$  Pitch of stays 18 $\times$ 14 $\frac{1}{2}$  How are stays secured D. Nuts Working pressure by rules 288 Material of stays Steel

Area at smallest part 7.06 Area supported by each stay 26.1 Working pressure by rules 281 Material of Front plates at bottom Steel

Thickness 1 $\frac{1}{16}$  Material of Lower back plate Steel Thickness 1 $\frac{1}{8}$  Greatest pitch of stays 14 $\times$ 7 $\frac{1}{2}$  Working pressure of plate by rules 347

Diameter of tubes 2 $\frac{1}{2}$  Pitch of tubes 3 $\frac{1}{2}$  $\times$ 3 $\frac{1}{4}$  Material of tube plates Steel Thickness: Front 1 $\frac{1}{16}$  Back 7 $\frac{1}{8}$  Mean pitch of stays 10 $\frac{1}{8}$

Pitch across wide water spaces 14 Working pressures by rules 235 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9 $\frac{1}{4}$  $\times$ 20 $\frac{1}{2}$  Length as per rule 2 $\cdot$ 10 $\frac{3}{8}$  Distance apart 7 $\frac{1}{2}$  Number and pitch of stays in each 4 @ 7

Working pressure by rules 287 Steam dome: description of joint to shell Yes % of strength of joint Yes

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

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

SUPERHEATER. Type Yes Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes

Date of Test Yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

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



IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of feed & bilge pump valves: a quantity of assorted bolts & nuts: iron of various sizes: propeller shaft & nut: 2 propeller blades, nuts & studs.

The foregoing is a correct description,

New York Shipbuilding Corp. Manufacturer.

Dates of Survey while building: During progress of work in shops: 1917 May 8 Oct 4.26.31 Nov 21.28 Dec 4 Jan 22.30 Feb 14.22.27 Mar 15.28 Apr 18 May 2.14.24.27 up to Sept 23 1918 During erection on board vessel: 1918 Apr 27 Oct 2.8.14.23.26.29 Nov 6.15.22 Dec 19 Jan 6.17.20 Feb 11.20.27 Mar 4.24 Apr 11.16.26 May 8.12.16.26.31.12.1919 Total No. of visits: 61

Is the approved plan of main boiler forwarded herewith? yes

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 18.4.18 Slides 14.6.18 Covers 2.10.18 Pistons 18.4.18 Rods 8.10.18 Connecting rods 14.6.18 Crank shaft 13.8.18 Thrust shaft 23.10.18 Tunnel shafts 13.8.18 Screw shaft 16.9.18 Propeller 23.7.18 Stern tube 23.7.18 Steam pipes tested 12.5.19 Engine and boiler seatings 23.9.18 Engines holding down bolts 22.11.18 Completion of pumping arrangements 14.6.19 Boilers fixed 8.5.19 Engines tried under steam 12.6.19 Completion of fitting sea connections 23.9.18 Stern tube 23.9.18 Screw shaft and propeller 23.9.18 Main boiler safety valves adjusted 6.6.19 Thickness of adjusting washers lock nuts fitted Material of Crank shaft steel Identification Mark on Do. 1917 Material of Thrust shaft steel Identification Mark on Do. 1917 Material of Tunnel shafts steel Identification Marks on Do. 1917 Material of Screw shafts steel Identification Marks on Do. 1917 Material of Steam Pipes steel Test pressure 660 lbs per sq in

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.)

Donkey Engines: 12" x 8" x 24": 9" x 8 1/2" x 10": 10" x 6" x 10": 4 1/2" x 3 1/4" x 4": 6" x 4" x 6": 2 @ 4 1/2" x 6 1/2" x 6": 7 1/2" x 10 1/4" x 10": 6 1/2" x 4 1/8" x 8": 14" x 10 1/4" x 12": 6 1/2" x 3 1/2" x 6":

The machinery of this vessel has been built under Special Survey: the material and workmanship being good, and proved satisfactory on steam trial.

It is submitted that this vessel be eligible for a record of + L. M. C. 6.19 in the Register Book, also notation fitted for Oil Fuel 6.19 Flash point above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 6.19 F.D.

Fitted for Oil Fuel 6.19 F.P. above 150°F.

The amount of Entry Fee ... \$ 15: 00: When applied for, 25.6.19  
Special ... \$ 265: 75:  
Donkey Boiler Fee ... £ : : When received, 22/7/19  
Travelling Expenses (if any) \$ 7: 00:

Committee's Minute

New York JUL - 1 1919

Assigned

+ LMC 6.19

Roll. 18/7/19

A. T. Thomas

Engineer Surveyor to Lloyd's Register of Shipping.



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Lloyd's Register Foundation

Rpt. 13.

RE

Port of

No. in Reg. Book on the Built

Owners Eme

Yard No. 197

DESCRIPTION OF

Four (9)

Marine En

Capacity of Dynam

Where is Dynam

Position of Main S

Positions of auxil

"B" Bridge

"D" Upper

If fuses are fitted

circuits Y

If vessel is wired

Are the fuses of

Are all fuses fitted

are permanent

Are all switches an

Total number of li

A 175

A' 109

B 32

B' 55

C 68

C' 115

D 65

E 70

2 Mast head

2 Side

8

If arc lights, what

Where are the swi

DESCRIPTION OF

Main cable carrying

Branch cables carry

Branch cables carry

Leads to lamps carry

Cargo light cables car

DESCRIPTION OF

Joints in cables, how

and Pair

Are all the joints of c

positions, none b

Are there any joints

How are the cables le