

# REPORT ON MACHINERY.

No. 2557

REC'D NEW YORK

May 1, 1917

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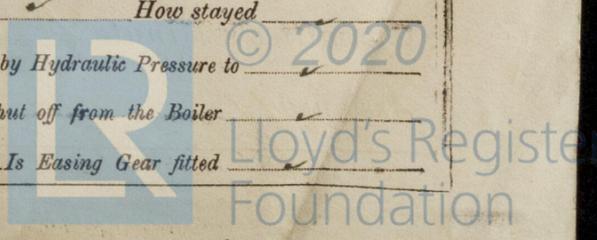
of writing Report 25<sup>th</sup> April 1917 When handed in at Local Office 25<sup>th</sup> April 1917 Port of Philadelphia  
 in Survey held at Philadelphia Date, First Survey 11<sup>th</sup> April 1916 Last Survey 23<sup>rd</sup> April 1917  
 Book. on the S.S. "Santa Paula" (Number of Visits 55)  
 ter Built at Philadelphia By whom built The W. Cramp & Sons Phil. B. Co. Tons <sup>Gross</sup> 1917  
 nes made at Philadelphia By whom made The W. Cramp & Sons Phil. B. Co. (No. 356) when made 1917  
 ers made at Do By whom made Do when made 1917  
 stered Horse Power Owners Atlantic & Pacific S. S. Co Port belonging to New York  
 Horse Power as per Section 28 631 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

INES, &c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4  
 of Cylinders 25 1/2, 27, 32 1/2, 36 Length of Stroke 54 Revs. per minute 75 Dia. of Screw shaft as per rule 15 1/2 Material of Iron  
as fitted 16 1/4 screw shaft) Is the after end of the liner made water tight  
 e screw shaft fitted with a continuous liner the whole length of the stern tube Yes  
 e 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  
 en the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two  
 s are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 6' 0"  
 of Tunnel shaft as per rule 14 1/2 Dia. of Crank shaft journals as per rule 14 1/4 Dia. of Crank pin 15 1/2 Size of Crank webs 10 1/2 x 10 Dia. of thrust shaft under  
as fitted 14 1/2 Dia. of screw 18 0 Pitch of Screw 18 6 No. of Blades 4 State whether moveable Yes Total surface 89 sq ft  
 of Feed pumps 3 Diameter of ditto 12 x 8 Stroke 24 Can one be overhauled while the other is at work Yes  
 of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 27 Can one be overhauled while the other is at work Yes  
 of Donkey Engines 9 Sizes of Pumps See list No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room & Blr Rm 5-3 1/2, 1-4, 2-2 1/2 oil pump In Holds, &c. 1-2-3 1/2, 1-2-2-3 1/2, 2-2 1/2, 1-2-4-3 1/2  
1-2 1/2 thrust recess, 1-3 1/2 tunnel well, 1-4-2-3 1/2 fore peak, 1-3 1/2 aft peak, 1-3 1/2  
 of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes - 4"  
 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  
 all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both  
 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  
 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  
 pipes are carried through the bunkers Bilge pipes How are they protected Extra heavy steel pipe  
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes  
 e Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Eng room top plating

ERS, &c.—(Letter for record 9) Manufacturers of Steel Worth & Carnegie  
 Heating Surface of Boilers 8881 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 single ended  
 Working Pressure 275 lbs Tested by hydraulic pressure to 335 lbs Date of test 26-2-17 No. of Certificate 118  
 each boiler be worked separately Yes Area of fire grate in each boiler 71.5 sq ft No. and Description of Safety Valves to  
 boiler double spring loaded Area of each valve 12.56 sq in Pressure to which they are adjusted 273 lbs Are they fitted with easing gear Yes  
 least distance between boilers or uptakes and bunkers or woodwork 13" Mean dia. of boilers 15.54 Length 12.45 Material of shell plates Steel  
 ness 1 1/8 Range of tensile strength 75/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. Riv.  
 seams T. R. O. B. S. Diameter of rivet holes in long. seams 1 7/16 Pitch of rivets 8 7/8 Lap of plates or width of butt straps 21 3/4  
 entages of strength of longitudinal joint rivets 95.2 Working pressure of shell by rules 244 Size of manhole in shell 16" x 12"  
plate 82.39 of compensating ring flanged No. and Description of Furnaces in each boiler 4 corrugated Material Steel Outside diameter 3.74  
 h of plain part top 5/8 Thickness of plates bottom 5/8 Description of longitudinal joint weld No. of strengthening rings 2  
 Working pressure of furnace by the rules 231 Combustion chamber plates: Material Steel Thickness: Sides 3/4 Back 3/4 Top 3/4 Bottom 3/4  
 of stays to ditto: Sides 7 1/2 x 7 Back 7 1/2 x 6 1/2 Top 7 1/2 x 7 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 369  
 Area of stays steel Area at smallest part 1.81 Area supported by each stay 52.5 Working pressure by rules 310 End plates in steam space:  
 Area of stays steel Thickness 1 1/8 Pitch of stays 18 x 18 How are stays secured D. nuts Working pressure by rules 261 Material of stays steel  
 Area at smallest part 8.29 Area supported by each stay 334 Working pressure by rules 266 Material of Front plates at bottom steel  
 Area 1 1/8 Material of Lower back plate steel Thickness 1 1/8 Greatest pitch of stays 14 x 6 1/2 Working pressure of plate by rules 375  
 Pitch of tubes 2 1/2 Pitch of tubes 3 1/4 x 3 1/2 Material of tube plates steel Thickness: Front 1 1/8 Back 1 1/8 Mean pitch of stays 9 1/8  
 across wide water spaces 14 Working pressures by rules 236 Girders to Chamber tops: Material Steel Depth and  
 Area of girder at centre 10 x 20 Length as per rule 3.05 Distance apart 7 3/8 Number and pitch of stays in each 4 @ 7"  
 Working pressure by rules 280 Steam dome: description of joint to shell Yes % of strength of joint Yes  
 Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes  
 Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

HEATER. Type Yes Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes  
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes  
 Pressure to which each is adjusted Yes Is Easing Gear fitted Yes

W1281-0173



IS A DONKEY BOILER FITTED?  No

If so, is a report now forwarded?

Rpt. 13.

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 and helix pump valves; a quantity of assorted bolts & nuts; iron of various sizes; 1 tail shaft; 1 eccentric rod & strap; 1 valve spindle etc

Port of Ph  
No. in on the Reg. Book Built

Card No. 43

The foregoing is a correct description,  
THE WM. CRAMP & SONS SHIP & ENGINE BUILDING CO.

J. F. Mellen Manufacturer.

Dates of Survey while building  
During progress of work in shops - - 1916  
During erection on board vessel - - - 1917  
Total No. of visits 55

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts - Cylinders 1.9.16 Slides 13.11.16 Covers 26.10.16 Pistons 5.11.16 Rods 5.11.16  
Connecting rods 13.11.16 Crank shaft 13.11.16 Thrust shaft 5.12.16 Tunnel shafts 9.2.17 Screw shaft 26.2.17 Propeller 26.2.17  
Stern tube 26.2.17 Steam pipes tested 10.4.17 Engine and boiler seatings 17.3.17 Engines holding down bolts 3.4.17  
Completion of pumping arrangements 23.4.17 Boilers fixed 14.4.17 Engines tried under steam 22.4.17  
Completion of fitting sea connections 17.3.17 Stern tube 7.3.17 Screw shaft and propeller 15.3.17  
Main boiler safety valves adjusted 23.4.17 Thickness of adjusting washers Lock nuts fitted  
Material of Crank shaft Steel Identification Mark on Do. 356 Material of Thrust shaft Steel Identification Mark on Do. 356  
Material of Tunnel shafts Steel Identification Marks on Do. 356 Material of Screw shafts Iron Identification Marks on Do. 356  
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  Yes If so, state name of vessel S.S. "Santa Rosa"

DESCRIPTION OF

There a K.W. 425 R.P.

Capacity of Dynamo

Where is Dynamo

Position of Main S

Positions of auxili

W. J. M.

If fuses are fitted

circuits  Yes

If vessel is wired

Are the fuses of

Are all fuses fitted

are permanent

Are all switches an

Total number of lig

A 6

B 16

C 111

D 39

E 70

2 Mast head

2 Side

If are lights, what

Where are the swit

DESCRIPTION OF

tain cable carrying

branch cables carry

branch cables carry

leads to lamps carry

argo light cables car

DESCRIPTION OF

inst. - Ad

black we

are on a

oints in cables, how

rubber

re all the joints of

positions, none

re there any joints

ow are the cables

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

Donkey Engines - 7 1/2" x 10 1/4" x 10"; 16" x 10 1/4" x 12"; 6" x 3 1/4" x 7"; 2 @ 6" x 4" x 6"; 3 @ 4 1/2" x 6 1/2" x 6";  
1 auxiliary circulating to centrifugal

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 4 in the Register Book. (Fitted for burning oil fuel 4.17 F.P. above 150°F. per Oil Law 4/5/17 R.P.F.)

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 4.17. F.D.

Fitted for oil fuel 4.17. F.P. above 150°F.

The amount of Entry Fee ... \$ 15 - 00: When applied for,  
Special ... \$ 257 - 75: 25/4 1917  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) \$ 6 - 00: 26.5.17 9/6/17

A. T. Thomas

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York MAY 3 1917

MACHINERY CERTIFICATE WRITTEN 17.5.17

Assigned

+ L.M.C 4.17 Elec Light  
Fitted for oil fuel 4.17 F.P. above 150°F.



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The Surveyors are requested not to write on or below the space for Committee's Minute.