

REPORT ON MACHINERY.

No. 2557

REC'D NEW YORK

May 1, 1917

Received at London Office

of writing Report 25th April 1917 When handed in at Local Office 25th April 1917 Port of Philadelphia
 in Survey held at Philadelphia Date, First Survey 11th April 1916 Last Survey 23rd April 1917
 Book. on the S.S. "Santa Paula" (Number of Visits 55)
 ter Built at Philadelphia By whom built The W. Cramp & Sons Phila. B. Co. Tons { Gross
 nes made at Philadelphia By whom made The W. Cramp & Sons Phila. B. Co. (No. 356) when made 1917 Net
 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 25¹/₂ x 27¹/₂ x 52¹/₂ x 76 Length of Stroke 54" Revs. per minute 75 Dia. of Screw shaft as per rule 15¹/₂" Material of Iron
as fitted 16¹/₂" screw shaft)
 e 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
 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 14¹/₂" Dia. of Crank shaft journals as per rule 14¹/₂" Dia. of Crank pin 15¹/₂" Size of Crank webs 10¹/₂" Dia. of thrust shaft under
as fitted 14¹/₂" Dia. of screw 18' 0" Pitch of Screw 18' 6" No. of Blades 4 State whether moveable Yes Total surface 89¹/₂"
 of Feed pumps 3 Diameter of ditto 12¹/₂" Stroke 24" Can one be overhauled while the other is at work Yes
 of Bilge pumps 2 Diameter of ditto 4¹/₂" Stroke 27" Can one be overhauled while the other is at work Yes
 of Donkey Engines 9 Sizes of Pumps See over No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room & Blr Rm 5¹/₂ x 3¹/₂ x 1¹/₂ + 2 x 2¹/₂ oil pump In Holds, &c. 1¹/₂ x 2¹/₂ x 3¹/₂; 1¹/₂ x 2¹/₂ x 3¹/₂; 2¹/₂ x 2¹/₂ x 3¹/₂; 12¹/₂ x 4¹/₂ x 3¹/₂
1¹/₂ x 2¹/₂ thrust recess; 1¹/₂ x 3¹/₂ thrust well; 1¹/₂ x 4¹/₂ x 2¹/₂ x 3¹/₂; fore peak 1¹/₂ x 3¹/₂; aft peak 1¹/₂ x 3¹/₂
 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 by forcing

ERS, &c.—(Letter for record 8) Manufacturers of Steel Worth & Carnegie
 Heating Surface of Boilers 8881¹/₂ Is Forced Draft fitted Yes No. and Description of Boilers 3 single ended
 ing 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 71.5¹/₂ No. and Description of Safety Valves to
 boiler double spring loaded Area of each valve 12.56" Pressure to which they are adjusted 273 lbs Are they fitted with easing gear Yes
 est 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 1¹/₂" Range of tensile strength 78/32 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 1¹/₂" Pitch of rivets 8¹/₂" Lap of plates or width of butt straps 21¹/₄"
 entages of strength of longitudinal joint rivets 25.2 Working pressure of shell by rules 244 Size of manhole in shell 16" x 12"
plate 52.29
 f compensating ring flanged No. and Description of Furnaces in each boiler 4 corrugated Material Steel Outside diameter 3.74"
 h of plain part top 5¹/_{8"} Thickness of plates crown 5¹/_{8"} Description of longitudinal joint weld No. of strengthening rings 3
bottom 5¹/_{8"}
 ing 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 7¹/₂" x 7" Back 7¹/₂" x 6¹/₂" Top 7¹/₂" x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 369
 ial 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:
16" Steel Thickness 1¹/₂" Pitch of stays 18" x 18" How are stays secured D. Nuts Working pressure by rules 261 Material of stays Steel
 at smallest part 8.29" Area supported by each stay 334" Working pressure by rules 266 Material of Front plates at bottom Steel
82" 1¹/₂" Material of Lower back plate Steel Thickness 1¹/₂" Greatest pitch of stays 14" x 6¹/₂" Working pressure of plate by rules 375
 ter of tubes 2¹/₂" Pitch of tubes 3¹/₄" x 3¹/₂" Material of tube plates Steel Thickness: Front 1¹/₂" Back 7/8" Mean pitch of stays 9¹/₂"
 across wide water spaces 14" Working pressures by rules 236 Girders to Chamber tops: Material Steel Depth and
 ess of girder at centre 10¹/₂" x 20¹/₂" Length as per rule 3.05" Distance apart 7¹/₂" Number and pitch of stays in each 4 @ 7"
 ing pressure by rules 280 Steam dome: description of joint to shell Yes % of strength of joint Yes
 ter Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes
 of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

REHEATER. Type Yes Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes
 Test Yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
 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?

yes

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

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

J. F. Mellen Manufacturer.

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

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " yes

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 13.10.16 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"

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 6" 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 Laws 4/5/17 R.P.H.)

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:
Special ... \$ 257 - 75:
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) \$ 6 - 00:

When applied for,

25/4 1917

When received,

26.5.17

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

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

Elec. Light



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Foundation