

REPORT ON MACHINERY.

No. 412

Received at London Office

10 MAY 1928

Date of writing Report April 27, 1928 When handed in at Local Office

19 Port of Cleveland, Ohio

No. in Survey held at Point Pleasant, W. Virginia Date, First Survey Aug. 1, 1927 Last Survey April 8, 1928
Reg. Book. on the stern wheel steamer "ZAPATOCA" (Number of Visits 24)

Master Built at Point Pleasant By whom built Point Pleasant, W. Virginia When built 1928-4

Engines made at West Virginia By whom made Marietta Manufacturing Co. when made 1928-4

Boilers made at J.H.P. By whom made Amer. Locomotive Company when made 1927

Registered Horse Power 750 Owners Tropical Oil Company Port belonging to Barranguilla
Nom. Horse Power as per Section 28 278 249 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Twin Tandem Compound No. of Cylinders 4 No. of Cranks 2

Dia. of Cylinders 5 1/2" H.P. & 30" L.R. Length of Stroke 84" Revs. per minute 25 Dia. of Screw shaft as per rule 15" Material of shaft Ni steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube ✓ Is the after end of the liner made water tight

in the propeller boss ✓ If the liner is in more than one length are the joints burned 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 ✓

Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule 15" Dia. of Crank pin 6" Size of Crank webs 25" x 9 3/4" Dia. of thrust shaft under

collars Dia. of screw 20'-0" Pitch of screw 3'-0" x 26'-0" No. of Blades 13 State whether moveable yes Total surface ✓

No. of Feed pumps 2 Diameter of ditto 8" x 5" Stroke 12" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 12" x 10" Stroke 12" Can one be overhauled while the other is at work yes

Circulating pump 8" centrifugal - 1800 gal. per min. 6" x 6" engine. Cargo pumps

No. of Donkey Engines In Engine Room none ✓ In Holds, &c. 6" suction main - 4" branches

No. of Bilge Injections ✓ sizes ✓ Connected to condenser, or to circulating pump ✓ Is a separate Donkey Suction fitted in Engine room & size on deck

Are all the bilge suction pipes fitted with roses ✓ Are the roses in Engine room always accessible ✓ 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 valves ✓

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ✓ Are the Discharge Pipes above or below the deep water line yes ✓

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 coverings ✓

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

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

DILERS, &c.—(Letter for record ✓) Manufacturers of Steel See Rpt. No. 28143. N.Y. forwarded herewith

Total Heating Surface of Boilers 4134 Is Forced Draft fitted no No. and Description of Boilers 3 Locomotive type

Working Pressure 225 # Tested by hydraulic pressure to 338 lbs. Date of test 20/9/27 No. of Certificate 511

Can each boiler be worked separately yes ✓ Area of fire grate in each boiler oil fired No. and Description of Safety Valves to

each boiler Two Spring loaded Area of each valve 406 # Pressure to which they are adjusted 225 Are they fitted with easing gear yes ✓

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Working seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Percentages of strength of longitudinal joint rivets..... Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

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

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules End plates in steam space:

Material of stays Area at smallest part Area supported by each stay Working pressure by rules Material of stays

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom

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

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

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

Thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

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

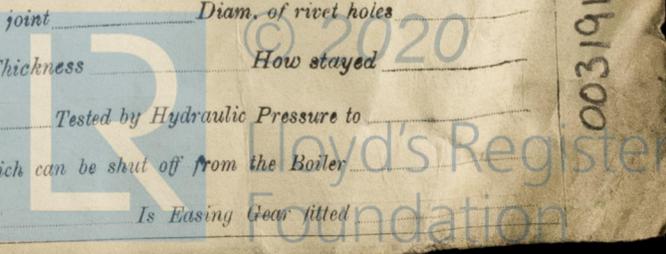
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

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

PERHEATER. 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

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



003191-003199-0035

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

As per Rules

The foregoing is a correct description,

Manitowoc Mfg Co by R.H. Miller, Ch. Engr. Manufacturer.

Dates of Survey while building	During progress of work in shops --	1927. Aug. 12, 29, 30, 31. Oct. 20, 21, 22, 27. Nov. 10, 15, 16. Dec. 6, 7, 8.	
		During erection on board vessel --	1928. Jan. 31. Feb. 18, 19, 17, 18, 19. Mar. 21, 22, 23. April 7, 8.
		Total No. of visits	27.

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders	<i>Aug. 1 to Oct. 22</i>	Slides	<i>Aug. 1 to Oct. 22</i>	Covers	<i>Aug. 1 to Oct. 22</i>	" donkey " Pistons	<i>Aug. 1 to Oct. 22</i>	Rods	<i>Aug. 1 to Oct. 22</i>
Connecting rods	<i>Aug. 1 to Oct. 22</i>	Crank shaft	<i>Nov. 16</i>	Thrust shaft	<input checked="" type="checkbox"/>	Tunnel shafts	<input checked="" type="checkbox"/>	Screw shaft	<input checked="" type="checkbox"/>
Stern tube	<input checked="" type="checkbox"/>	Steam pipes tested	<i>Feb. 19</i>	Engine and boiler seatings	<i>March 22</i>	Engines holding down bolts	<i>Jan. 23</i>		
Completion of pumping arrangements	<i>Mar. 23</i>	Boilers fixed	<i>Nov. 16</i>	Engines tried under steam	<i>Mar. 23</i>				
Completion of fitting sea connections	<i>April 8</i>	Stern tube	<input checked="" type="checkbox"/>	Screw shaft and propeller	<input checked="" type="checkbox"/>				
Main boiler safety valves adjusted	<i>Mar. 23</i>	Thickness of adjusting washers	<i>Lock nuts fitted</i>						
Material of Crank shaft	<i>Steel</i>	Identification Mark on Do.	<i>1-9-27</i>	Material of Thrust shaft	<input checked="" type="checkbox"/>	Identification Mark on Do.	<input checked="" type="checkbox"/>		
Material of Steam Pipes	<i>Lap welded steel</i>	Identification Marks on Do.	<i>GD</i>	Material of Screw shafts	<input checked="" type="checkbox"/>	Identification Marks on Do.	<input checked="" type="checkbox"/>		
Is an installation fitted for burning oil fuel	<i>yes</i>	Test pressure	<i>675 lbs. per sq. in.</i>						
Have the requirements of Section 49 of the Rules been complied with	<i>yes</i>	Is the flash point of the oil to be used over 150°F.	<i>yes</i>						
Is this machinery duplicate of a previous case	<i>yes</i>	If so, state name of vessel	<i>"Cascajales"</i>						

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

The above engines & boilers have been built under Special Survey. The materials & workmanship employed in their construction were found to be sound & efficient. They have been fitted on board in a satisfactory manner, and were well under operating conditions. The vessel is eligible, in my opinion, for record of \pm L.M.C. ^{4.28} _{8.S.H.} in the Register Book. The safety valves have been set to blow off at 225 lbs per sq.

Certificate (if required) to be sent to

The amount of Entry Fee ...	\$ 20.00	When applied for,	<i>May 4 1928</i>
<i>Cleveland</i> ...	\$ 200.10	When received,	<i>5-7-1928</i>
<i>Special</i> ...	\$ 133.40		
<i>Elect. Light</i> ...	50.00		
Donkey Boiler fee ...	£ :		
Travelling Expenses (if any) £	:		

Committee's Minute NEW YORK MAY - 9 1928

Assigned *TLMC 428* CERTIFICATE WRITTEN *19.5.28*

G. Drummond

Engineer-Surveyor to Lloyd's Register of Shipping



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Note. Steam Pressure 225 lbs sq