

REC'D NEW YORK NOV 20 1920

# REPORT ON MACHINERY.

No. 3050

Rpt. 4.

Received at London Office

TUE. DEC 7 1920

Date of writing Report 10<sup>th</sup> Nov. 1920 When handed in at Local Office

Port of Baltimore Md

No. in Survey held at Alexandria Va

Date, First Survey 16 January 1920 Last Survey 2<sup>nd</sup> Oct- 1920

Reg. Book. 78048 on the Steamer Colin A Livingston

Master Laurent Built at Alexandria Va. By whom built Virginia SB Company Tons } Gross 6071 } Net 3781 } When built 1920

Engines made at Hamilton Ohio By whom made Hoover Brown & Rentschler Co. when made 1919

Boilers made at Chester Pa By whom made Sun Shipbuilding Company when made 1920

Registered Horse Power 2800 Owners US Shipping Board Port belonging to Alexandria Va

Nom. Horse Power as per Section 28 510 555 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

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

Dia. of Cylinders 24 1/2 - 41 1/2 - 72 Length of Stroke 48 Revs. per minute 88 Dia. of Screw shaft as per rule 14.29 15 Material of screw shaft as fitted 15 1/4 steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no 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 5' 2 1/2

Dia. of Tunnel shaft as per rule 12.9 13.16 Dia. of Crank shaft journals as per rule 13.75 13.81 Dia. of Crank pin 14 3/8 Size of Crank webs 9 1/2 x 27 1/4 Dia. of thrust shaft under collars 14 Dia. of screw 16.9 Pitch of Screw 15.9 No. of Blades 4 State whether moveable yes Total surface 77.66 sq ft

No. of Feed pumps 2 Diameter of ditto 12 x 8 Stroke 24 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 5 Stroke 21 Can one be overhauled while the other is at work yes

No. of Donkey Engines 4 Sizes of Pumps 12 x 8 1/2 x 12 10 x 7 x 10 7 1/2 x 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room No 1 Sucs 3 1/2 No 2 Sucs 3 1/2 No 3 Sucs 3 1/2 No 4 Sucs 3 1/2

No. of Bilge Injections one sizes 10 Connected to condenser, or to circulating pump Cir. Pumps a separate Donkey Suction fitted in Engine room & size yes 3 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

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 non-return valves fitted

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Engine room top platform

BOILERS, &c.—(Letter for record ✓) Manufacturers of Steel

Total Heating Surface of Boilers 8331 Is Forced Draft fitted yes No. and Description of Boilers 3 2 1/3

Working Pressure 200 Tested by hydraulic pressure to Date of test No. of Certificate

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

Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

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

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

Per centages 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

bottom 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

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

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

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

SUPERHEATER. Type 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

RETAIN

Lloyd's Register Foundation 2020 W389-0186

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - One Set of top end brasses with bolts & nuts, one Set Crank pin  
brasses with bolts & nuts, Two main bearing bolts & nuts, one H. P. Slide Valve spindle, Twelve  
followers bolts for each piston, one Set Springs for each piston, Two H. P. Two I. P. piston rings  
one L. P. piston ring, one Set Coupling bolts, Six piston valve rings, Twelve Cylinder Covers & Stud  
and Twelve Steam Chest covers Stud & nuts, One Set of Safety Valve Springs, Six Valves  
& Studs for air pump, One Set of Valves & Guards for bilge pumps, One Set of Valves, Guards  
and Springs for each independent pump, one Top & bottom Spring for H. P. piston Valve  
assorted bolts & nuts bars & plates of Iron  
The foregoing is a correct description,

Virginia Shipbuilding Corp.  
per M. Sager

Manufacturer.

Dates of Survey while building: During progress of work in shops -- May 14<sup>th</sup> 25 June 8<sup>th</sup> 18<sup>th</sup> Aug. 27<sup>th</sup> Sept. 16<sup>th</sup> 27<sup>th</sup> Oct. 15<sup>th</sup> 19<sup>th</sup> 22<sup>nd</sup>  
During erection on board vessel --  
Total No. of visits Eleven

Is the approved plan of main boiler forwarded herewith  
" " " donkey " " "  
Dates of Examination of principal parts: Cylinders Slides Covers Pistons Rods  
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller  
Stern tube Steam pipes tested 19<sup>th</sup> Oct 1920 Engine and boiler seatings 8<sup>th</sup> June Engines holding down bolts 15<sup>th</sup> Oct 1920  
Completion of pumping arrangements 15<sup>th</sup> Oct 1920 Boilers fixed July 1920 Engines tried under steam 26<sup>th</sup> Oct 1920  
Completion of fitting sea connections 20<sup>th</sup> June 1920 Stern tube 27<sup>th</sup> Sept. 1920 Screw shaft and propeller 14<sup>th</sup> May 1920  
Main boiler safety valves adjusted 26<sup>th</sup> Oct 1920 Thickness of adjusting washers none fitted  
Material of Crank shaft G.H. Steel Identification Mark on Do. #BS 1572 Material of Thrust shaft G.H. Steel Identification Mark on Do. #BS  
Material of Tunnel shafts G.H. Steel Identification Marks on Do. #BS (91) Material of Screw shafts G.H. Steel Identification Marks on Do. #BS (9)  
Material of Steam Pipes Lap welded steel Test pressure 600 lbs  
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. Anna E. Morse Report No 290

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

Machinery in this vessel was received in sections from the engine builders and assembled on board the vessel and examined during erection all materials were tested to the American Bureau of Shipping. Boilers were built at Chester Pa. (Philadelphia report No 3746) and have been installed in an efficient manner. Machinery and Boilers have been installed in an efficient manner from approved plans and under Special Survey during installation and is eligible in my opinion to have notation made in the register book of L.M.C 10-20 fitted for the burning of Oil Fuel flash point above 150° F

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

The amount of Entry Fee ... \$ 15.00 : When applied for, 2<sup>nd</sup> Nov 1920  
Special Total Fee \$ 235.75 :  
Donkey Boiler Fee 78.58 :  
Travelling Expenses (if any) 78.59 :  
Committee's Minute New York NOV 23 1920  
Assigned + d.m.b. 10.20

L. Norworthy  
Engineer Surveyor to Lloyd's Register of Shipping



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Date of writing  
No. in Survey Reg. Book. 78048 on the  
Master Law  
Engines made of  
Boilers made of  
Registered Ho  
Nom. Horse Po  
ENGINES,  
Dia. of Cylinder  
Is the screw s  
in the propell  
between the be  
liners are fitte  
Dia. of Tunnel  
collars 14"  
No. of Feed p  
No. of Bilge p  
No. of Donkey  
In Engine Ro  
No. of Bilge In  
Are all the bilg  
Are all connect  
Are they fixed  
Are they each f  
What pipes ar  
Are all Pipes  
Are the Bilge  
Is the Screw  
OILERS,  
Total Heating  
Working Pr