

## REPORT ON MACHINERY.

No. 2766

Received at London Office  
Date of writing Report *Jan 24 1920* When handed in at Local Office *Jan 26 1919* Port of *Baltimore*  
No. in Survey held at *Alexandria Va.* Date, First Survey *Aug 19 1919* Last Survey *Dec 31 1919*  
Reg. Book. on the *S. S. E. A. Morse* (Number of Visits *16*)  
Master *R. M. Packer* Built at *Alexandria Va.* By whom built *Virginia Shipbuilding Co.* Tons { Gross *6059* Net *3743*  
Engines made at *Phillipsburg N.J.* By whom made *Ingersoll Rand Co. (No 1080)* when made *1919*  
Boilers made at *Chester Pa.* By whom made *Sun Shipbuilding Co.* when made *1919*  
Registered Horse Power Owners *U.S. Steamship Corp.* Port belonging to *Alexandria Va.*  
Nom. Horse Power as per Section 28 *475* 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 *80* Dia. of Screw shaft as per rule *13.5* as fitted *14.5* Material of screw shaft *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 *5-3 1/2*Dia. of Tunnel shaft as per rule *12.9* as fitted *13.25* Dia. of Crank shaft journals as per rule *13.75* as fitted *14* Dia. of Crank pin *14 3/8* Size of Crank web *9 1/2 x 29 1/4* Dia. of thrust shaft under collars *14* Dia. of screw *16.5* Pitch of Screw *15-9* No. of Blades *4* State whether moveable *Yes* Total surface *77.66*No. of Feed pumps *2* Diameter of ditto *2 1/2* 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 pumpsIn Engine Room *2 - 3 1/2* Thrust recess *1-3 1/2* Tunnel *1-3 1/2* In Holds, &c. *No 1-2, 3 1/2 No 2, 2-3 1/2 No 3, 2-3 1/2 No 4-2-3 1/2*No. 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 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 *Yes* 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 *top platform of E.R.*BOILERS, &c.—(Letter for record *37*) Manufacturers of SteelTotal Heating Surface of Boilers *8331* Is Forced Draft fitted *Yes* No. and Description of Boilers *3 S.B.*Working Pressure *190* Tested by hydraulic pressure to *190* Date of test *1919* No. of Certificate *190*Can each boiler be worked separately *Yes* Area of fire grate in each boiler *oil burner* No. and Description of Safety Valves to each boiler *2 direct spring loaded* Area of each valve *9.320* Pressure to which they are adjusted *190 lbs* Are they fitted with easing gear *Yes*Smallest distance between boilers or uptakes and bunkers or woodwork *Yes* Mean dia. of boilers *Yes* Length *Yes* Material of shell plates *Yes*Thickness *Yes* Range of tensile strength *Yes* Are the shell plates welded or flanged *Yes* Descrip. of riveting: cir. seams *Yes*long. seams *Yes* Diameter of rivet holes in long. seams *Yes* Pitch of rivets *Yes* Lap of plates or width of butt straps *Yes*Per centages of strength of longitudinal joint *Yes* Working pressure of shell by rules *Yes* Size of manhole in shell *Yes*Size of compensating ring *Yes* No. and Description of Furnaces in each boiler *Yes* Material *Yes* Outside diameter *Yes*Length of plain part *Yes* Thickness of plates *Yes* Description of longitudinal joint *Yes* No. of strengthening rings *Yes*Working pressure of furnace by the rules *Yes* Combustion chamber plates: Material *Yes* Thickness: Sides *Yes* Back *Yes* Top *Yes* Bottom *Yes*Pitch of stays to ditto: Sides *Yes* Back *Yes* Top *Yes* If stays are fitted with nuts or riveted heads *Yes* Working pressure by rules *Yes*Material of stays *Yes* Area at smallest part *Yes* Area supported by each stay *Yes* Working pressure by rules *Yes* End plates in steam space: *Yes*Material *Yes* Thickness *Yes* Pitch of stays *Yes* How are stays secured *Yes* Working pressure by rules *Yes* Material of stays *Yes*Area at smallest part *Yes* Area supported by each stay *Yes* Working pressure by rules *Yes* Material of Front plates at bottom *Yes*Thickness *Yes* Material of Lower back plate *Yes* Thickness *Yes* Greatest pitch of stays *Yes* Working pressure of plate by rules *Yes*Diameter of tubes *Yes* Pitch of tubes *Yes* Material of tube plates *Yes* Thickness: Front *Yes* Back *Yes* Mean pitch of stays *Yes*Pitch across wide water spaces *Yes* Working pressures by rules *Yes* Girders to Chamber tops: Material *Yes* Depth and *Yes*Thickness of girder at centre *Yes* Length as per rule *Yes* Distance apart *Yes* Number and pitch of stays in each *Yes*Working pressure by rules *Yes* 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*Diameter of Safety Valve *Yes* Pressure to which each is adjusted *Yes* Is Easing Gear fitted *Yes*

6200-721M



4. 2766  
IS A DONKEY BOILER FITTED?

No If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Set top end braces with bolts & nuts, 1 Set bottom end braces with bolts & nuts, 2 main bearing bolts & nuts, 1 H. P. valve spindle 12 follower bolts for pistons, 1 set of springs each for H. P. & I. P. piston 1 Spring ring for L. P. piston, 1 Set coupling bolts, 2 safety valve springs 12 cylinder cover & 12 steam chest studs & nuts, 6 valves & guards for air pump 1 set valves & guards for bilge pumps, 1 set valves & guards & springs for each independent pump fitted Assorted bolts & nuts, sheet & bar iron

The foregoing is a correct description.

Virginia Shipbuilding Corp

per D. H. Hamer Plant Mgr

Manufacturer.

Dates of Survey while building { During progress of work in shops -- Aug 19-29-Sept 30 Oct 7<sup>th</sup> 10-21-24-29-31 Dec 2-5-9-16-23-30-31  
During erection on board vessel -- 16.  
Total No. of visits 16.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders Aug 19 Slides Aug 19 Covers Aug 19 Pistons Aug 19 Rods Aug 19  
Connecting rods Aug 29 Crank shaft Oct 10 Thrust shaft Oct 13 Tunnel shafts Oct 13 Screw shaft Oct 7<sup>th</sup> Propeller Oct 7<sup>th</sup>  
Stern tube Oct 7<sup>th</sup> Steam pipes tested Dec 16 Engine and boiler seatings Sep 30<sup>th</sup> Engines holding down bolts Oct 9<sup>th</sup>  
Completion of pumping arrangements Dec 25 Boilers fixed Dec 2<sup>nd</sup> Engines tried under steam Dec 31<sup>st</sup>  
Completion of fitting sea connections Oct 24 Stern tube Oct 24 Screw shaft and propeller Oct 24  
Main boiler safety valves adjusted Dec 31<sup>st</sup> Thickness of adjusting washers F 1 3/4 A 1 1/2 P 1 1/2 S 1 1/2 F 1 3/4 A 1 1/2  
Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.  
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.  
Material of Steam Pipes Steel Test pressure 500 by U.S. local inspectors  
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 Gunston Hall, Betty Bell, Canada

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

Machinery in this vessel was received in sections from the engine builder and assembled on board the vessel and examined during erection. All materials were tested by the American Bureau of Shipping. Boilers were built at Chester Pa. (Philadelphia report No 3467) 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 in the register book of L. M. C. 12. 19 fitted for the burning of oil fuel. flash point above 150 degrees. Electric light

It is submitted that this vessel is eligible for

THE RECORD L.M.C. 12.19.

FITTED FOR OIL FUEL 12.19. F.P. ABOVE 150°F

The amount of Entry Fee ... £ 15.00. When applied for, Jan 10<sup>th</sup> 1920  
Special ... £ 157.84  
Donkey Boiler Fee ... £  
Travelling Expenses (if any) £ 40.00. When received, Jan 19<sup>th</sup> 1920

Committee's Minute

Assigned

New York FEB - 3 1920

MACHINERY DEPT.  
WRITTEN  
23.2.20

John M. Sheriff

Engineer Surveyor to Lloyd's Register of Shipping.



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