

REPORT ON MACHINERY.

No. 1043

Received at London Office SAT. 10. AUG. 1918

Date of writing Report 12 July 1918 When handed in at Local Office 16 July 1918 Port of Boston
 No. in Survey held at Bath, Me. Date, First Survey 21 Dec 1917 Last Survey 6 July 1918
 Reg. Book. 5/3 on the SAGADAHOC (Number of Visits 10)
 Master ✓ Built at Bath, Me. By whom built The Texas Steamship Co. When built 1918
 Engines made at Buffalo, N.Y. By whom made H. G. Trout Co. when made 1918
 Boilers made at Staten Island N.Y. By whom made Staten Island S.B. Co. when made 1918
 Registered Horse Power ✓ Owners U.S. Shipping Board Port belonging to Bath
 Nom. Horse Power as per Section 28 555 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 26 1/2" - 44" - 74" Length of Stroke 51" Revs. per minute 75 Dia. of Screw shaft 14 7/8" 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 ✓ 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 5'-3 3/4"
 Dia. of Tunnel shaft 13 7/8" as per rule 14 1/8" Dia. of Crank shaft journals 14 1/4" as per rule 14 3/4" Dia. of Crank pin 14 3/4" Size of Crank webs 28x10" Dia. of thrust shaft under collars 14 3/4" Dia. of screw 17'-6" Pitch of Screw 18'-0" No. of Blades 4 State whether moveable yes Total surface 87 sq ft
 No. of Feed pumps 2 Diameter of ditto 12x7 1/2" Stroke 24" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 5 1/2" Stroke 24" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 + 5 small Sizes of Pumps BALLAST 12x10x12 DUPLER OIL TRANSFER 12x10x12 SANITARY 6x6x6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4-3 1/2" In Holds, &c. 2-3 1/2" in each hold + 2-6" in deep tanks
 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 6"
 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 ✓
 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 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 No bunkers Oil fuel 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
 Dates of examination of completion of fitting of Sea Connections 10 April 1918 of Stern Tube 2 April 1918 Screw shaft and Propeller 18 Apr 1918
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Skillet deck Cambria Steel Co.

BOILERS, &c.—(Letter for record Y) Manufacturers of Steel Cambria Steel Co.
 Total Heating Surface of Boilers 8118 Is Forced Draft fitted yes No. and Description of Boilers 3 single ended Scotch
 Working Pressure 190 lbs Tested by hydraulic pressure to 285 lbs Date of test 28 Feb 1918 No. of Certificate 35
 Can each boiler be worked separately yes Area of fire grate in each boiler Oil fuel No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 9.62 sq in Pressure to which they are adjusted 195 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork about 8" Mean dia. of boilers 15'-0" Length 11'-0" Material of shell plates steel
 Thickness 1 1/32" Range of tensile strength 62720/71680 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R. LAP long. seams T.R. D.B.S. Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 21"
 Per centages of strength of longitudinal joint rivets 102 plate 82 Working pressure of shell by rules 205 lbs Size of manhole in shell 16x12"
 Size of compensating ring 7 1/2" x 1 1/32" No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 48 1/4"
 Length of plain part top Thickness of plates bottom 5 5/8" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 207 lbs Combustion chamber plates: Material steel Thickness: Sides 1 9/32" Back 5/8" Top 5/8" Bottom 7/8"
 Pitch of stays to ditto: Sides 7x6 1/2" Back 7 1/4x7" Top 6 1/2x8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 256 lbs
 Material of stays Iron Diameter at smallest part 1.5" Area supported by each stay 50.75 sq in Working pressure by rules 260 lbs End plates in steam space: Material steel Thickness 1 1/8" Pitch of stays 17x15" How are stays secured Double nuts Working pressure by rules 221 lbs Material of stays steel
 Diameter at smallest part 2 3/4" Area supported by each stay 255 sq in Working pressure by rules 242 Material of Front plates at bottom steel
 Thickness 3/4" Material of Lower back plate steel Thickness 3/4 + 3/4 doubling Greatest pitch of stays 13 1/2" Working pressure of plate by rules 240 lbs
 Diameter of tubes 2 1/2" Pitch of tubes 3 1/2" x 3 11/16" Material of tube plates steel Thickness: Front 13/16 + 3/4 D. Back 13/16 Mean pitch of stays 9.03
 Pitch across wide water spaces 13 1/2" Working pressures by rules 263 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9x2" Length as per rule 33" Distance apart 8" Number and pitch of stays in each 4-6 1/2"
 Working pressure by rules 338 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓
 If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓
 Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

Engine + Boiler Particulars Taken from New York + Cleveland reports, Nos 14772 + 139, Herewith

W118-0029

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No donkey boiler

No.	Description				
Made at	By whom made	When made	Where fixed		
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with casing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length	
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied: *2 top end bolts + nuts, 2 bottom end bolts + nuts, 2 main bearing bolts, 1 set coupling bolts, 1 set feed + bilge pump valves, assorted nuts, bolts + iron. 1 propeller shaft, 2 propeller blades, 1 section crank shaft, 1 pair crank pin + 1 pair crosshead brasses, 1 ecc rod complete, 1 valve rod, 1 link block, 1 set piston rings, 12 junk ring bolts, 1 pair chest cover bolts, spare valves + parts for all pumps, boiler tubes, condenser tubes + oil fuel fittings.*

The foregoing is a correct description,

The James Steamships
per Capt Donkey mgr Manufacturer.

Dates of Survey while building: During progress of work in shops - - - ✓
During erection on board vessel - - - 19/7 21 Dec 1918 Feb 27 Apr 2, 10, 18, 23 June 10, 20, July 2, 6.
Total No. of visits 10

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

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 10 June 1918 Engine and boiler seatings 27 Feb 1918 Engines holding down bolts 10 June 1918
Completion of pumping arrangements 20 June 1918. Boilers fixed 10 June 1918. Engines tried under steam 2 July 1918
Main boiler safety valves adjusted 2 July 1918. Thickness of adjusting washers Lock nuts fitted Port $\frac{3}{4}$ Centre $\frac{5}{8}$ Star $\frac{5}{8}$
Material of Crank shaft Steel Identification Mark on Do. 58 FWT Material of Thrust shaft Steel Identification Mark on Do. 58 FWT
Material of Tunnel shafts Steel Identification Marks on Do. 58 FWT Material of Screw shafts Steel Identification Marks on Do. 58 FWT
Material of Steam Pipes steel Test pressure 600 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery + boilers of this vessel have been built under Special Survey at Buffalo, N.Y. + New York as per New York report 14772 + Cleveland report 139 herewith. They have now been fitted on board in accordance with the Rules + approved plans + the workmanship + material are good. The requirements of Sec. 49 have been complied with.*

The machinery + boilers have been satisfactorily tried under steam + they are now in good + safe working condition + eligible, in my opinion, to receive the notations + LMC 7.18 (in red) FD + 'Fitted for Oil fuel 7.18 F.P. above 150°F' in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.18 F.P. FITTED FOR OIL FUEL 7.18 F.P. ABOVE 150°F.

APR 22 1918

John S. Heck

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £ 15.00 :
Special .. £ 239.10 :
Donkey Boiler Fee .. £ 60.00 :
Travelling Expenses (if any) £ 42.00 :

Committee's Minute New York JUL 23 1918

Assigned + LMC 7.18 Elec Lt

MACHINERY CERTIFICATES



IN DUPLICATION. MS. Certificate (if required) to be sent to BOSTON.

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