

Rpt. 4.

REPORT ON MACHINERY

No. 1649

TUE. JAN. 20. 1914

Date of writing Report 7th Jan 1914 When handed in at Local Office 7th Jan 1914 Port of Baltimore Md.No. in Survey held at Sparrows Point Md. Date, First Survey 10th Dec 1912 Last Survey 7th Jan 1914
Reg. Book. 18 Supp on the S. S. "Washingtonian" (Number of Visits 132)

Master J. B. Parse Built at Sparrows Pt. Md. By whom built Maryland Steel Co. Gross 6650 Tons Net 4065

Engines made at Sparrows Pt. Md. By whom made Maryland Steel Co. When built 1914

Boilers made at " By whom made " when made 1914

Registered Horse Power 7 Owners American-Hawaiian S. S. Co. Port belonging to New York

Nom. Horse Power as per Section 28 704 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple Expansion Reciprocating of Cylinders 4 No. of Cranks 4

Dia. of Cylinders 25 1/2, 37, 53 1/2, 78 Length of Stroke 54 Revs. per minute 83 Hollow Dia. of Screw shaft as per rule 15 5/8 Material of Ingot 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 Electrically Welded 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 Hollow as per rule 14 1/4 Hollow Length of stern bush 5'-6"

Dia. of Tunnel shaft as fitted 14 1/4 Dia. of Crank shaft journals as per rule 14 3/4 Hollow Dia. of Crank pin 15 1/2 Dia. of Crank webs 30 x 11 1/2 Dia. of thrust shaft under

collars 15 1/4 Dia. of screw 18-6 Pitch of Screw 20 Dia. of Blades 4 State whether moveable Yes Total surface 118 sq ft

No. of Feed pumps 2 Diameter of ditto 9 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 5 Stroke 20 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 4 Sizes of Pumps Dup 12 x 8 x 10 Sim 10 x 12 x 12 Dup 6 x 7 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room P 3 1/2 S 3 1/2 C 3 1/2 Boiler Room 3-3 1/2 In Holds, &c. F.P. 1-3 1/2 Nos 1-2-3-4 Holds & Deep tank

each 2-3 1/2 No 5-4-3 1/2 No 3 Cofferdam 2-3

No. of Bilge Injections 1 sizes 10 Connected to condenser, or to circulating pump Pump 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 None

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

Dates of examination of completion of fitting of Sea Connections 10/10/13 of Stern Tube 22/9/13 Screw shaft and Propeller 10/10/13

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper Dk.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Lukens Iron & Steel Co. & Penna Steel Co.

Total Heating Surface of Boilers 1099 } 10618 } total. Is Forced Draft fitted Yes No. and Description of Boilers 3. Single ended Scotch

Working Pressure 215 lb. Tested by hydraulic pressure to 323 lb. Date of test C 29.7.13 No. of Certificate 5 31732

Can each boiler be worked separately Yes Area of fire grate in each boiler 68 1/3 sq ft No. and Description of Safety Valves to

each boiler 2 - Direct Spring Area of each valve 9.621 Pressure to which they are adjusted 215 lb. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork No bunkers Mean dia. of boilers 16'-0" Length 12'-3" Material of shell plates Steel

Thickness 1 1/2 Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.L.

long. seams J.R.B. Diameter of rivet holes in long. seams 1 9/16 Pitch of rivets 9/8-4 7/8 Lap of plates or width of butt straps 22 3/4-14 1/4

Per centages of strength of longitudinal joint rivets 79.5 Working pressure of shell by rules 215.5 Size of manhole in shell 15" x 11"

Size of compensating ring 31 1/2 x 27 1/2 No. and Description of Furnaces in each boiler 4. Morrison Material Steel Outside diameter 45 1/4

Length of plain part top Thickness of plates crown 5/8 Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 222.5 Combustion chamber plates: Material Steel Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 15/16

Pitch of stays to ditto: Sides 7 x 7 3/8 Back 7 1/2 x 7 3/8 Top 7 x 7 3/8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 236

Material of stays Steel Diameter at smallest part 1 9/16 Area supported by each stay 57.18 Working pressure by rules 311 End plates in steam space:

Material Steel Thickness 1 1/16 Pitch of stays 15 x 14 1/4 How are stays secured Washers Working pressure by rules 242 Material of stays Steel

Diameter at smallest part 2 7/8 Area supported by each stay 221.25 Working pressure by rules 255 Material of Front plates at bottom Steel

Thickness 3/4 Material of Lower back plate Steel Thickness 1/4 with 1/4 double Greatest pitch of stays 14 1/2 Working pressure of plate by rules 232

Diameter of tubes 2 3/4 Pitch of tubes 3 7/8 Material of tube plates Steel Thickness: Front 3/4 with 3/8 double Back 7/8 Mean pitch of stays 7 3/4

Pitch across wide water spaces 13 3/4 Working pressures by rules 241.5 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9 1/2 x 2 Length as per rule 37 Distance apart 7 3/8 Number and pitch of stays in each 4-7

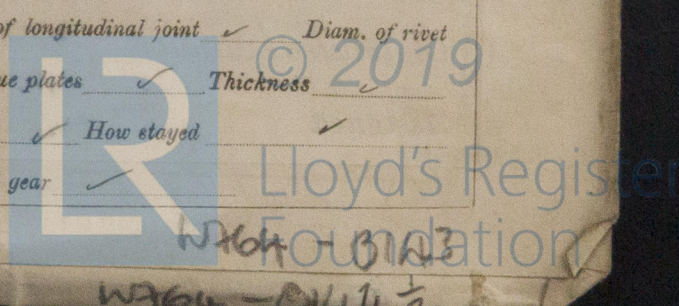
Working pressure by rules 261 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

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



W764-0144 1/2

VERTICAL DONKEY BOILER—

Manufacturers of Steel

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 easing 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
 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:— 4 Con. Rod top end & 2 con. rod bottom end bolts & nuts, 2 Main bearing & 1 set coupling ditto, 1/2 set of guards, springs, valves & seats for feed, bilge, ballast & all donkey pumps, 1 set piston rings each engine, assorted bolts, nuts, steel, iron & brass, Spare tail & 1 section crank shafts, 1 propeller hub & 4 bronze blades, 2 pair top & 1 pair bottom end brasses, 2 main bearings, 4 valve rods, condenser & boiler tubes etc.

The foregoing is a correct description,
 Maryland Steel Company
 Manufacturer.

Dates of Survey while building
 During progress of work in shops—
 During erection on board vessel—
 Total No. of visits 132
 Is the approved plan of main boiler forwarded herewith Retained for duplicate

Dates of Examination of principal parts—Cylinders 29/10/13 Slides 27/10/13 Covers 27/10/13 Pistons 27/10/13 Rods 27/10/13
 Connecting rods 3/10/13 Crank shaft 10/9/13 Thrust shaft 18/8/13 Tunnel shafts 23/9/13 Screw shaft 8/8/13 Propeller 10/10/13
 Stern tube 22/9/13 Steam pipes tested 19/11/13 Engine and boiler seatings 10/11/13 Engines holding down bolts 10/11/13
 Completion of pumping arrangements 29/12/13 Boilers fixed 10/11/13 Engines tried under steam 17/12/13
 Main boiler safety valves adjusted 17/12/13 Thickness of adjusting washers PE 7/8 A 1 1/4 C.P 1 1/4 S 1 1/4 S.F 1 1/2 A 1 1/8
 Material of Crank shaft Steel Identification Mark on Do. H.A.S. Material of Thrust shaft Steel Identification Mark on Do. A 131
 Material of Tunnel shafts Steel Identification Marks on Do. 131 Material of Screw shafts Steel Identification Marks on Do. H.A.S.
 Material of Steam Pipes Weldless Steel Test pressure 538 (U.S. Inspection)

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

The Machinery of this vessel has been constructed under Special Survey in accordance with the Rules of this Society and the approved plans. The materials & workmanship are good. The engines & boilers have been tried under steam and found satisfactory rendering the vessel eligible, in my opinion, to have record L.M.C. 1.14 Fitted for Liquid Fuel, Forced Draught, Electric Light, Refrigerating Machinery.

The Machinery of this vessel is a duplicate of that of sister ships "Pennsylvanian" "Panaman" etc Baltimore Reports Nos 1595 & 1620

It is submitted that this vessel is eligible for
 3SB(FD.) & 1AuxSB. THE RECORD. + LMC 1.14.
 Ref. Mchy. Fitted for oil fuel 1.14, F.P. above 150° F.

The amount of Entry Fee .. £ 15.00 :
 Special .. £ 276.00 :
 Donkey Boiler Fee .. £ 10.00 :
 Travelling Expenses (if any) £ 10.63 :
 When applied for, 10/11/14
 When received, 21/11/14

Committee's Minute FRI. FEB. 13. 1914

Assigned

+ L.M.C. 1.14

MACHINERY CERTIFICATE
 WRITTEN

Fitted for oil fuel 1.14 F.P. above 150° F



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