

REC'D NEW YORK MAR 22 1921

Rpt. 4.

REPORT ON MACHINERY.

No. 3134

Received at London Office TUE. 12 APR. 1921

Date of writing Report 17th March 1921 When handed in at Local Office 19th March 1921 Port of Baltimore md

No. in Survey held at Baltimore md Date, First Survey 24th May 1920 Last Survey 17th March 1921

Reg. Book. on the Single Screw Steamer Aladdin (Number of Visits 23)

Master Anderson Built at Sparrows pt md By whom built Bethlehem S.S. Corp.

Engines made at Sparrows pt md By whom made " " " when made 1921

Boilers made at " " By whom made " " " when made 1921

Registered Horse Power Owners Standard Transportation Co Port belonging to New York

Nom. Horse Power as per Section 28 598 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 27-47-78 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 15.47 Material of screw shaft as fitted 16 1/2

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

Is 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 Continuous liner If two liners are fitted, is the shaft lapped or protected between the liners Continuous Length of stern bush 12' 8 3/4

Dia. of Tunnel shaft as per rule none Dia. of Crank shaft journals as per rule 15.115 Dia. of Crank pin 15 1/2 Size of Crank webs 54x30 1/2 Dia. of thrust shaft under collars 15 1/2 Dia. of screw 18' 0" Pitch of Screw 17'-1" No. of Blades 4 State whether moveable yes Total surface 89.2 ft²

No. of Feed pumps 2 Diameter of ditto 12x8" Stroke 24" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes

No. of Donkey Engines 1 Sizes of Pumps 16x10x14 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Five 3 1/2", Two 4" in Boiler room In Holds, &c. 5" line in each cargo tank

No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Cir pump Is a separate Donkey Suction fitted in Engine room & size yes 1-4"

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 Valves & Cocks

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 above

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 none return valve fitted

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

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

Total Heating Surface of Boilers 8235 ft² Is Forced Draft fitted YES No. and Description of Boilers 3 Single ended Scotch

Working Pressure 220 Tested by hydraulic pressure to 330 Date of test (28-9-20, 8-10-20, 26-10-20) No. of Certificate 190-191-192

Can each boiler be worked separately yes Area of fire grate in each boiler 66 ft² No. and Description of Safety Valves to each boiler Two 3 1/2" Spring loaded Area of each valve 9.62 Pressure to which they are adjusted 220 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 15' 0" Length 11' 9" Material of shell plates OH Steel

Thickness 1 1/16" Range of tensile strength 28-32 Are the shell plates welded or flanged Flanged Descrip. of riveting: cir. seams DR lap.

Long. seams OBSTR Diameter of rivet holes in long. seams 19/16 Pitch of rivets 10" Lap of plates or width of butt straps 22 3/8

Percentage of strength of longitudinal joint rivets 91.5% Working pressure of shell by rules 246 Size of manhole in shell 12x16"

Size of compensating ring 2' 7 1/2" x 3'-2" No. and Description of Furnaces in each boiler 3 Morrison Material OH Steel Outside diameter 4'-0 3/8"

Length of plain part top bottom Thickness of plates crown bottom 43/64 Description of longitudinal joint Welded No. of strengthening rings 16

Working pressure of furnace by the rules 229 Combustion chamber plates: Material OH Steel Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 15/16

Pitch of stays to ditto: Sides 6 3/4" x 7 1/2" Back 7 1/2" x 7 1/2" Top 6 3/4" x 8" If stays are fitted with nuts or riveted heads Riveted Working pressure by rules 221

Material of stays Steel Area at smallest part 1.76 Area supported by each stay 7 1/2 x 7 1/2 Working pressure by rules 227 End plates in steam space:

Material S Thickness 1 1/4" Pitch of stays 17 1/2" x 17 1/2 How are stays secured Nuts Working pressure by rules 229 Material of stays S

Area at smallest part 8.29 Area supported by each stay 17 1/2 x 17 1/2 Working pressure by rules 223 Material of Front plates at bottom S

Thickness 15/16 Material of Lower back plate S Thickness 1 3/16 Greatest pitch of stays 7 1/2 Working pressure of plate by rules 310

Diameter of tubes 3" Pitch of tubes 4 1/2" Material of tube plates S Thickness: Front 15/16 Back 7/8 Mean pitch of stays 8 1/2 x 12 1/2

Pitch across wide water spaces 13" Working pressures by rules 224 Girders to Chamber tops: Material S Depth and

Thickness of girder at centre 10 1/2 x 3/4 Length as per rule 3' 0" Distance apart 8" Number and pitch of stays in each 6 3/4

Working pressure by rules 228 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

Visits 68 PERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to 2020

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

W492-0174

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

SPARE GEAR. State the articles supplied:—1 Crank Complete. 1 Sail shaft. 2 propeller blades. 2 top end brasses with 2 nuts & bolts. 1 Set Crank pin brasses with bolts & nuts. 2 main bearing bolts. 1 Set Coupling bolts. 1 Piston rod. 2 Spring rings each for H. & P. D. P. pistons. 1 Spring ring for L. P. Piston. 1 Valve link block. 12 Cylinder covers & 12 Steam chest cover nuts & studs. 1 Set of valves & gear for air pump. 1 Set of valves & springs for bilge pump. 1 Set of valves for feed pumps. Safety Valve Springs a quantity of assorted stud nuts & bolt bars & plates of iron.

The foregoing is a correct description,

B. Campbell Bethlehem Shipbuilding Corp. Inc.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 24th May - 3rd 9th 14th June. 2nd 14th 18th July 18th 23rd August. 3rd 14th 23rd 28th Sept. 7th 20th Oct. During erection on board vessel - - 2nd 5th 14th 15th 18th 21st 23rd Feb. 9th 14th 17th March 1921 Total No. of visits

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 24th May 1920 Slides 18th August Covers 2nd Sept. Pistons 3rd Sept. Rods 3rd Sept. Connecting rods 3rd Sept. Crank shaft 14th June Thrust shaft 2 July Tunnel shafts — Screw shaft 23rd Nov. Propeller 23rd Nov. Stern tube 9th June 1920 Steam pipes tested 2nd February Engine and boiler seatings 28th Sept 1920 Engines holding down bolts 2nd February Completion of pumping arrangements 20th February Boilers fixed 6th February Engines tried under steam 23rd February Completion of fitting sea connections 22 January Stern tube 26 January 1921 Screw shaft and propeller 20th Oct. Main boiler safety valves adjusted 24th February Thickness of adjusting washers

Material of Crank shaft *6H Steel* Identification Mark on Do. *(480) WC* Material of Thrust shaft *6H Steel* Identification Mark on Do. *481 V.C.*

Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts *6H Steel* Identification Marks on Do. *481 V.C.*

Material of Steam Pipes *Steel* Test pressure *220 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 Argon*

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

Boilers & machinery have been built under special survey from approved plans and this from tested material. Workmanship and material are good. Boilers & machinery have been tried out under steam pressure and found to work in a satisfactory manner. The machinery in this vessel is eligible in my opinion to have notation in the Register Book *L.M.C 3-21* Electric lights. forced draught, fitted for the burning of oil fuel.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 3.21 FD CL

Fitted for bil Fuel 3.21 FP above 150° F

Roll

19/4/21

ARB

£6 fee (per T.R. 18/3) \$ 30.00

The amount of Entry Fee ... \$524 50: When applied for,

Special ... £ : 12th March 1921

Donkey Boiler Fee *C.R. Philadelphia* 35: 00: When received,

Travelling Expenses (if any) £ 20: 00: 28 May 1921

Committee's Minute New York MAR 29 1921

Assigned + L.M.C. 3.21

MACHINERY CERT. WRITTEN 12/4/21



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