

REPORT ON MACHINERY.

No. 3100

Received at London Office

of writing Report April 30th 1921 When handed in at Local Office May 2nd 1921 Port of Baltimore Md MIN 22 MAY 1921
 in Survey held at Baltimore Md Date, First Survey June 4th 1920 Last Survey March 26th 1921
 g. Book. on the Single Screw Steamer Agwipond (Number of Visits 25) Tons 8024.91
 aster Built at Sparrows pt Md By whom built Bethlehem S.B. Corporation When built 1921
 gines made at Sparrows pt Md By whom made Bethlehem S.B. Corporation when made 1921
 ilers made at " " By whom made " " when made 1921
 gistered Horse Power 636 Owners Atlantic Gulf & West Indies S.S. Co Port belonging to New York
 m. Horse Power as per Section 28 636 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

GINES, &c.—Description of Engines Quadruple No. of Cylinders 4 No. of Cranks 4
 a. of Cylinders 25-35-51-75 Length of Stroke 51 Revs. per minute 70 Dia. of Screw shaft 15-27 Material of screw shaft Steel
 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
 the propeller boss yes If the liner is in more than one length are the joints burned Continuous 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 no If two
 ers are fitted, is the shaft lapped or protected between the liners no Length of stern bush 5' 4 3/4"
 a. of Tunnel shaft 13-3 Dia. of Crank shaft journals 13-98 Dia. of Crank pin 15" Size of Crank webs 11 1/2" Dia. of thrust shaft under
 lars 14 3/4" Dia. of screw 19' 0" Pitch of Screw 16' 0" No. of Blades 4 State whether moveable yes Total surface
 of Feed pumps 2 Diameter of ditto 12x8" Stroke 24" Can one be overhauled while the other is at work yes
 of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes
 of Donkey Engines 1 Sizes of Pumps 16x10x14" No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 7 2 1/2" 3" 3 1/2" 4" In Holds, &c. On her bilge Pumping plans
 of Bilge Injections 1 sizes 12 / Connected to condenser, or to circulating pump Circ Pump Is a separate Donkey Suction fitted in Engine room & size
 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
 all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both
 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
 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
 at pipes are carried through the bunkers none How are they protected no
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 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
 the Screw Shaft Tunnel watertight mach. aft. Is it fitted with a watertight door no worked from no

ILERS, &c.—(Letter for record S) **Manufacturers of Steel** Lukens Steel Co
 al Heating Surface of Boilers 9315 Is Forced Draft fitted yes No. and Description of Boilers 3 Single end Scotch
 orking Pressure 220 Tested by hydraulic pressure to 330 Date of test ? No. of Certificate ?
 n each boiler be worked separately yes Area of fire grate in each boiler ? No. and Description of Safety Valves to
 h boiler Levin 3 1/2" Area of each valve 9.62 Pressure to which they are adjusted 220 Are they fitted with easing gear yes
 allest distance between boilers or uptakes and bunkers or woodwork no Mean dia. of boilers 15' 3" Length 11' 5 1/2" Material of shell plates Steel
 ickness 1 1/16" Range of tensile strength 60,671,680 Are the shell plates welded or flanged flanged Descrip. of riveting: cir. seams double
 g. seams treble Diameter of rivet holes in long. seams 1 9/16" Pitch of rivets 9 3/8" Lap of plates or width of butt straps 22 3/8"
 rcentages of strength of longitudinal joint 90% Working pressure of shell by rules 240 Size of manhole in shell 12x16
 e of compensating ring 32 1/2 x 38 x 1 1/2" No. and Description of Furnaces in each boiler 3 Morrison Material S Outside diameter 4' 0 1/2"
 ngth of plain part 8 1/2" Thickness of plates 11/16" Description of longitudinal joint welded No. of strengthening rings no
 orking pressure of furnace by the rules 229 Combustion chamber plates: Material S Thickness: Sides 7/16" Back 7/16" Top 11/16" Bottom 15/16" plan
 tch 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 299
 aterial of stays Steel Area at smallest part 2.06 Area supported by each stay 3.3-4.69 Working pressure by rules 289 End plates in steam space:
 aterial Steel Thickness 1 1/8" Pitch of stays 7 3/8" How are stays secured nuts both sides Working pressure by rules 289 Material of stays Steel
 rea at smallest part 2 7/8" Area supported by each stay 5 x 16 1/2" Working pressure by rules 289 Material of Front plates at bottom Steel
 ickness 1 5/16" Material of Lower back plate Steel Thickness 1 3/16" Greatest pitch of stays 7 7/8" Working pressure of plate by rules 318
 iameter of tubes 2 1/2" Pitch of tubes 3 1/2 x 3 3/4" Material of tube plates Steel Thickness: Front 15/16" Back 3/4" Mean pitch of stays 6 1/2 x 7 1/4"
 itch across wide water spaces 7 1/4 12 3/4 Working pressures by rules 327 Girders to Chamber tops: Material Steel Depth and
 ickness of girder at centre 9" Length as per rule 3' 1" Distance apart 6 1/2 - 7 1/2" Number and pitch of stays in each 4 @ 7"
 orking pressure by rules 266 Steam dome: description of joint to shell no % of strength of joint no
 iameter no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet holes no
 itch of rivets no Working pressure of shell by rules no Crown plates no Thickness no How stayed no

PERHEATER. Type no Date of Approval of Plan no Tested by Hydraulic Pressure to no
 ate of Test no Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler no
 iameter of Safety Valve no Pressure to which each is adjusted no Is Easing Gear fitted no



IS A DONKEY BOILER FITTED? *Yes*

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

SPARE GEAR. State the articles supplied:—1 Crank Complete. 1 Tail shaft. 2 propeller blades. 2 Top end brasses & bolts & nuts. 1 set Crank pin brasses with bolts & nuts. 2 main bearing bolts & nuts. 1 set of coupling bolts. 1 piston rod. 2 Spring rings each H.P. & I.P. pistons. 1 Spring ring for I.P. piston. 1 Valve link block. 12 Cylinder covers & 12 Steam chest studs & nuts. 1 set of valves & guards for air pump. 1 set valves for bilge pump. 1 set of valves & springs for each independent pump. Quantity of assorted studs nuts & bolts bars & plates of iron

The foregoing is a correct description,
BETHLEHEM SHIPBUILDING CORP., LTD
SPARROWS POINT PLANT

Geo. H. Hutson

Manufacturer.

GENERAL MANAGER

Dates of Survey while building: During progress of work in shops -- *June 4th 14, Aug. 6, 23, 28, Sept. 20, 21, Oct. 6, 8, 12, 18, Nov. 8, 12, 16, 23, Dec 30 1920*
During erection on board vessel --- *Feb. 23, 25, 28, March, 8, 10, 13, 17, 23, 26 1921*
Total No. of visits *Twenty nine*

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *Nov. 23* Slides *Nov 23* Covers *Nov 16* Pistons *Nov 16* Rods *Nov 16*
Connecting rods *Nov 23* Crank shaft *Oct 18th* Thrust shaft *Oct 18* Tunnel shafts *Nov 8* Screw shaft *Oct 6th* Propeller *Oct 6*
Stern tube *Oct 8th* Steam pipes tested *Mar. 19th* Engine and boiler seatings *Feb. 15th* Engines holding down bolts *Mar. 8th*
Completion of pumping arrangements *Mar. 20th* Boilers fixed *February 1921* Engines tried under steam *Mar. 26*
Completion of fitting sea connections *Feb. 14th* Stern tube *Feb. 17th 1921* Screw shaft and propeller *Feb. 15th*
Main boiler safety valves adjusted *March 23rd* Thickness of adjusting washers

Material of Crank shaft *Steel* Identification Mark on Do. *W.C* Material of Thrust shaft *Steel* Identification Mark on Do. *W.C*

Material of Tunnel shafts *Steel* Identification Marks on Do. *W.C* Material of Screw shafts *Steel* Identification Marks on Do. *W.C*

Material of Steam Pipes *Lap welded steel* Test pressure *4140 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 *No* If so, state name of vessel

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

Boilers and machinery have been built under special survey from approved plans and from tested material. Workmanship and material are good. Boilers and 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 4.21. Electric light. forced draught fitted for the burning of oil fuel

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 4.21. F.D. CL. fitted for Oil Fuel 4.21 FP above 150° F. 220 lb 125 lb.

Reck 30/5/21 *J.R.R.*

The amount of Entry Fee ... £ # 30: 00 :
Special Inclusion of Sur. Fee ... \$ 559: 00 :
Donkey Boiler Fee ... \$ 20: 00 :
Electric Installation \$ 350: 00 :
Travelling Expenses (if any) \$ 20: 00 :
When applied for, *April 5th 1921*
When received, *9-11-21*

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

Committee's Minute *New York* **MAY 10 1921**

Assigned *+ L.M.C. 4.21*

MACHINERY CERT
WRITTEN
23.5.21
issued 15.6.21

