

## REPORT ON MACHINERY.

No. 2353

THU. 27 JUN. 1918

REC'D NEW YORK May 31 1918

Received at London Office

Writing Report May 17 1918 When handed in at Local Office

Port of Baltimore Md

Survey held at Baltimore Md.

Date, First Survey October 2<sup>nd</sup> 1917. Last Survey May 6<sup>th</sup> 1918

Book. on the S. S. Ampetco.

(Number of Visits 27)

Gross 8301.06

Net 6227.08

When built 4.18.

Built at Sparrows Point Md. By whom built Bethlehem Shipbuilding Co.

Made at Sparrows Point Md. By whom made Bethlehem Shipbuilding Corporation when made 4.18.

Made at Sparrows Point Md. By whom made Bethlehem Shipbuilding Corporation when made 3.18.

Horse Power Owners W. S. Shipping Board Emergency Fleet Corp Port belonging to Baltimore Md.

Horse Power as per Section 28 560 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes.

Engines, &amp;c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4

Cylinders 24, 35, 51, 75 Length of Stroke 51" Revs. per minute 73 Dia. of Screw shaft 14.88" Material of Steel

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

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

In the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive fits tight If two

are fitted, is the shaft lapped or protected between the liners 14.15 Length of stern bush 5'-0"

Tunnel shaft as per rule 13.324 13.48 Dia. of Crank shaft journals as per rule 14.5 Dia. of Crank pin 14.75 Size of Crank webs 29 1/4 x 9 1/8 Dia. of thrust shaft under

s 14.5 Dia. of screw 17'-9" Pitch of Screw 17'-9" No. of Blades 4 State whether moveable yes Total surface 100 sq ft.

Feed pumps 3 Diameter of ditto 11x8 Stroke 24 Can one be overhauled while the other is at work yes

Bilge pumps 2 Diameter of ditto 3.5 Stroke 26 Can one be overhauled while the other is at work yes

Donkey Engines 2 Sizes of Pumps 8x8 1/2 x 12 6x5 1/4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 4-3 1/2 In Holds, &amp;c.

Bilge Injections 1 sizes 9 Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room &amp; size yes 3 1/2"

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.

All connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves with exception of boiler blow down

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.

Pipes are carried through the bunkers Oil fuel heaters How are they protected

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

Screw Shaft Tunnel watertight Machinery Aft Is it fitted with a watertight door worked from

ERS, &amp;c.—(Letter for record (5) Manufacturers of Steel Lukens Iron &amp; Steel 3SB

Heating Surface of Boilers 7641 Is Forced Draft fitted yes No. and Description of Boilers 3 Scotch

Working Pressure 220 Tested by hydraulic pressure to 330 Date of test 3-22-18 No. of Certificate 132

Each boiler be worked separately yes Area of fire grate in each boiler 60 sq ft. No. and Description of Safety Valves to

Boiler 2 Quiet Spring loaded Area of each valve 7.068" Pressure to which they are adjusted 220 Are they fitted with easing gear yes

Least distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 15'-0" Length 11'-6" Material of shell plates Steel

Thickness 1 1/16 Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams A.R.L.

Seams J.R. Butt Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 5+10 Lap of plates or width of butt straps 23 7/8"

Percentages of strength of longitudinal joint rivets 91.3 Working pressure of shell by rules 253.9 Size of manhole in shell 22 x 18

Compensating ring 38 3/4 x 34 3/4 No. and Description of Furnaces in each boiler 3 Moulson Material Steel Outside diameter 47 5/16"

Thickness of plates crown 21 Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 236 Combustion chamber plates: Material Steel Thickness: Sides 7/8 Back 7/8 Top 7/8 Bottom 1 1/16

Of stays to ditto: Sides 7 1/4 x 7 1/2 Back 7 1/4 x 7 Top 7 1/2 x 7 1/4 If stays are fitted with nuts or riveted heads Nuts washers Working pressure by rules 240.

Material of stays Steel Area at smallest part 2.075 Area supported by each stay 50.75 Working pressure by rules 24 1/3 End plates in steam space:

Material Steel Thickness 1 3/32 Pitch of stays 16 x 16 How are stays secured Nuts washers Working pressure by rules 267 Material of stays Steel

At smallest part 6.494 Area supported by each stay 256 Working pressure by rules 263 Material of Front plates at bottom Steel

Thickness 1 1/4 Material of Lower back plate Steel Thickness 3/16 Greatest pitch of stays 17 x 7 1/2 Working pressure of plate by rules 292.

Diameter of tubes 2 3/4 Pitch of tubes 4 x 3 3/4 Material of tube plates Steel Thickness: Front 13/16 Back 13/16 Mean pitch of stays 7 3/4"

Across wide water spaces 13 3/4 Working pressures by rules 296 Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 9 1/2 x 1 7/8 Length as per rule 2-6 1/2 Distance apart 7 3/4 Number and pitch of stays in each 3-7 1/2"

Working pressure by rules 307 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

Of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

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



IS A DONKEY BOILER FITTED?

yes.

If so, is a report now forwarded?

yes.

SPARE GEAR. State the articles supplied:—

1 Spare tail shaft with nut & key complete. 1 Spare Crank shaft in coupling bolts & nuts. 1 Propeller boss, 1 set studs & nuts for propeller. 2 spare propeller blades. Sprung rings for H.P. 1<sup>st</sup> M.P. & 2<sup>nd</sup> M.P. pistons. 1 Valve spindle and block link. 1 Eccentric shaft complete with bolts & nuts. 1 pair crank pin brasses (2 halves). 2 pair crosshead brasses (4 halves). 2 bottom end connecting rod bolts. 4 top end connecting rod bolts. 2 Main bearing bolts. 1 set cross bolts. 1 Set feed pump valves. 1 Set bilge pump valves & seats. 1 Set valves & seats & guards for each auxiliary pump. 3 Safety valve springs. 1 H. Pescape valve spring. 1 set gung rings.

The foregoing is a correct description,

BETHLEHEM SHIPBUILDING CORP., LTD.  
SPARROWS POINT PLANT

Manufacturer.

ASS'T GENERAL MANAGER

Dates	During progress of work in shops --	During erection on board vessel --	Total No. of visits
1-11-17	2-10-17	1-11-17	27
1-11-18	7-3-18	5-4-18	
1-11-18	11-3-18	5-4-18	
1-11-18	13-3-18	10-4-18	
1-11-18	14-3-18	15-4-18	
1-11-18	18-3-18	25-4-18	
1-11-18	22-3-18	1-5-18	
1-11-18	29-3-18		
1-11-18	4-4-18		
1-11-18	12-4-18		
1-11-18	23-4-18		

Is the approved plan of main boiler forwarded herewith

yes

donkey

Dates of Examination of principal parts—Cylinders 14.3.18 Slides 12.4.18 Covers 12.4.18 Pistons 12.4.18 Rods 7.3.18

Connecting rods 7.3.18 Crank shaft 7.3.18 Thrust shaft 5.4.18 Tunnel shafts 5.4.18 Screw shaft 11.3.18 Propeller 11.3.18

Stern tube 11.3.18 Steam pipes tested 23.4.18 Engine and boiler seatings 15.4.18 Engines holding down bolts 15.4.18

Completion of pumping arrangements 1-5.18 Boilers fixed 3.4.18 Engines tried under steam 1-5.18

Completion of fitting sea connections 11.3.18 Stern tube 11-3-18 Screw shaft and propeller 13-3-18

Main boiler safety valves adjusted 1.5.18 Thickness of adjusting washers 5/8" 3/4" 1" 1 1/8" 1 3/8" 1 1/2"

Material of Crank shaft Steel Identification Mark on Do. 395 Material of Thrust shaft Steel Identification Mark on Do. 395

Material of Tunnel shafts Steel Identification Marks on Do. 397 Material of Screw shafts Steel Identification Marks on Do. 397

Material of Steam Pipes Copper Test pressure 550 lbs

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. no

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. Engines and Boilers have now

installed onboard the vessel in an efficient manner and examined under

steam found to work satisfactorily Safety valves adjusted under steam

The machinery in this vessel eligible in my opinion to have notation + L.M.C.

Vessel fitted for carrying oil fuel flash point above 150°

It is submitted that  
this vessel is eligible for  
THE RECORD + L.M.C. 5.18. F.D.  
Fitted for oil fuel 5.18. F.P. above 150°F.

The amount of Entry Fee ...	When applied for, ...
Special ...	14-4-18
Donkey Boiler Fee ...	When received, ...
Travelling Expenses (if any) ...	2-9-18

Committee's Minute New York JUN 4 1918

Assigned + L.M.C. 5.18

Fitted for oil fuel 5.18 F.P. above 150°

John M. Sheriff  
Engineer Surveyor to Lloyd's Register of Shipping

Lloyd's Register  
Foundation