

REPORT ON MACHINERY.

No. 2353

THU. 27 JUN. 1918

Received at London Office

REC'D NEW YORK May 31 1918

Writing Report May 17 1918 When handed in at Local Office 19 Port of Baltimore Md
Survey held at Baltimore Md. Date, First Survey October 2nd 1917. Last Survey May 6th 1918

Book. on the S. S. Ampetco. (Number of Visits 27) Tons } Gross 8301.06
Net 6227.08

By P. H. Reeves Built at Sparrows Point Md. By whom built Bethlehem Shipbuilding Co. When built 4.18.

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

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

Indicated Horse Power 560 Owners U. S. Shipping Board Emergency Fleet Corp Port belonging to Baltimore Md.
Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Engines, &c. — Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4
No. of Cylinders 24, 35, 51, 75 Length of Stroke 51" Revs. per minute 73 Dia. of Screw shaft 14.88" Material of Steel
as fitted 15.25" screw shaft

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 yes Length of stern bush 5'-0"

Dia. of Tunnel shaft 14.5" as per rule 13.324" as fitted 13.48" Dia. of Crank shaft journals 14.5" as per rule 14.15" as fitted 14.05" Dia. of Crank pin 14.75" Size of Crank webs 29 1/4" x 9 1/8" Dia. of thrust shaft under
screws 14.5" Dia. of screw 17'-9" Pitch of Screw 17'-9" No. of Blades 4 State whether moceable yes Total surface 100 sq ft.

No. of Feed pumps 3 Diameter of ditto 11x8" Stroke 24" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 3.5" Stroke 26" Can one be overhauled while the other is at work yes

No. of 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, &c. —

Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2"
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 valves with exception of boiler blow down
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
How are they protected Oil fuel heaters

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

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

MANUFACTURERS, &c. — (Letter for record (5)) Manufacturers of Steel Lukens Iron & 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 8-22-18 No. of Certificate 132
1724

Can each boiler be worked separately yes Area of fire grate in each boiler 600 sq ft. No. and Description of Safety Valves to
each 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 38 to 32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DRH

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 1/8"
Percentage of strength of longitudinal joint rivets 91.3 Working pressure of shell by rules 253.9 Size of manhole in shell 23 x 18"
plate 13-135

No. of compensating ring 38 3/4" x 34 3/4" No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 47 5/16"
Thickness of plain part top — bottom — Thickness of plates crown 2 1/8" bottom 3/32" 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"
Material 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 sq in Working pressure by rules 247.3 End plates in steam space:
Material Steel Thickness 1 1/32" Pitch of stays 16" x 16" How are stays secured Nuts Washers Working pressure by rules 267 Material of stays Steel

Area at smallest part 6.49 sq in Area supported by each stay 256 sq in 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 1/4" Pitch of tubes 4" x 3 1/4" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 7 3/4"
Working pressures 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 —
Material — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet holes —

Working pressure 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 —
Date of Test — Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler —

Material 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 coupling bolts & nuts, 1 Propeller boss, 1 set studs & nuts for propeller, 2 spare propeller blades, 2 Spring rings for H.P. 1st M.P. & 2nd M.P. pistons, 1 Valve spindle and block link, 1 Eccentric shaft complete with bolts & nuts, 1 pair crank pin braces (2 halves), 2 pair crosshead braces (4 halves), 2 bottom end connecting rod bolts, 4 top end connecting rod bolts, 2 Main bearing bolts, 1 set 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. Escape valve spring, 1/2 set gung ring

The foregoing is a correct description,

BETHLEHEM SHIPBUILDING CORP., LTD.
SPARROWS POINT PLANT

Manufacturer.

ASS'T GENERAL MANAGER

Dates of Survey while building
During progress of work in shops -- *2-10-17, 10-10-17, 10-20-17, 5-11-17, 23-11-17, 28-11-17, 10-12-17, 17-12-17*
During erection on board vessel --- *1-11-18, 7-3-18, 11-3-18, 13-3-18, 14-3-18, 18-3-18, 22-3-18, 29-3-18, 4-4-18, 12-4-18, 23-4-18*
Total No. of visits *27*

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

" " " donkey " " " *yes*

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" 5/16" 1" 1 1/8" 7/8" 1"*

Material of Crank shaft *Steel* Identification Mark on Do. *395* Material of Thrust shaft *Steel* Identification Mark on Do. *397*

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*

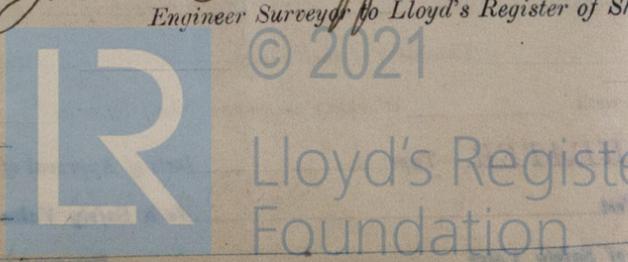
installed onboard the vessel in an efficient manner and examined under steam found to work satisfactorily. Safety valves adjusted under steam. The machinery in this vessel eligible in my opinion to have notation + L.M.C. Vessel fitted for carrying oil fuel. flash point above 150°.

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.

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

The amount of Entry Fee ... *£15.00* :
Special ... *£240.00* :
Donkey Boiler Fee ... *£10.00* :
Travelling Expenses (if any) *£7.00* :
When applied for, *14-4-18* 19...
When received, *2-9-18* 29/18

Committee's Minute *New York JUN 4 1918*
Assigned *+ L.M.C. 5.18*
Fitted for oil fuel 5.18 F.P. above 150°



MS

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