

REPORT ON MACHINERY.

No. 3064

REC'D NEW YORK Dec. 20-1918
 Date of writing Report Dec 21 1918 When handed in at Local Office Dec 21 1918 Port of Philadelphia
 Date, First Survey March 17 1917. Last Survey Dec 6 1918
 MON. 20 JAN. 1919

To. in Survey held at Wilmington Date, First Survey March 17 1917. Last Survey Dec 6 1918
 Reg. Book. on the Steel S.S. "Charles M. Everest"

Master S.S. Harris Built at Wilmington Del. By whom built Bethlehem Ship Bldg Corp. Harlan Plant When built 1918
 Tons Gross 51600 Net 3379

Engines made at Wilmington Del By whom made Bethlehem Ship Bldg Corp. Harlan Plant when made 1918
 Boilers made at " " By whom made " " when made 1917

Registered Horse Power Owners United States Shipping Board. Port belonging to Washington
 Nom. Horse Power as per Section 28 528 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

NGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27"-45"-44" Length of Stroke 48" Revs. per minute 80 Dia. of Screw shaft as per rule 14.8" Material of screw shaft Steel
 as fitted 15.625

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 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 Tight fit If two
 are fitted, is the shaft lapped or protected between the liners Length of stern bush 5'-6"

Dia. of Tunnel shaft as per rule 13.38" Dia. of Crank shaft journals as per rule 14.05" Dia. of Crank pin 14.5" Size of Crank webs 28 x 9" Dia. of thrust shaft under
 as fitted 13.75" as fitted 14.5"

cars 14.5" Dia. of screw 14'-9" Pitch of Screw 14'-0" No. of Blades 4 State whether moveable Yes Total surface 100 sq
 of Feed pumps 2 Diameter of ditto 10" x 8" Stroke 21" Can one be overhauled while the other is at work Yes

of Bilge pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work Yes
 of Donkey Engines 10 Sizes of Pumps over leaf No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 1 Boiler room 1-6" 1-3 1/2" 3-3" In Holds, &c. No 4 Cofferdam 1-5" Bunker 2-3 1/2" Bunker hiegs 2-2 1/2"
 3. Cofferdam 2-3 1/2" Forward Cofferdam 1-3 1/2" Deep Tank 2-5" Deep tank flat 2-2" Forepeak 1-3 1/2" After peak 1-3 1/2"

of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & 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 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 Bilge pipes & suction to 43 cofferdam How are they protected Heavy wooden casing

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

dates of examination of completion of fitting of Sea Connections 24-8-18 of Stern Tube 19-8-18 Screw shaft and Propeller 27-8-18
 the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

MLERS, &c.—(Letter for record S) Manufacturers of Steel Lukem Steel & Iron Co.
 al Heating Surface of Boilers 4488.2 sq Is Forced Draft fitted Yes No. and Description of Boilers 2 SE Scotch 2SB
 Working Pressure 180 lbs Tested by hydraulic pressure to 270 lbs Date of test 21-9-17 No. of Certificate 144

each boiler be worked separately Yes Area of fire grate in each boiler 180 sq No. and Description of Safety Valves to
 boiler 2 Spring Loaded Area of each valve 15-9 sq Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes

allest distance between boilers or uptakes and bunkers or woodwork 3'-0" Mean dia. of boilers 18'-1 1/2" Length 11'-8 1/2" Material of shell plates Steel
 thickness 1 1/2" Range of tensile strength 6000-71680 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR.L.

seams 1 R.D.B.S. Diameter of rivet holes in long. seams 9/16" Pitch of rivets 9/4" Lap of plates or width of butt straps 22 1/2"
 percentages of strength of longitudinal joint rivets 88.3% plate 89% Working pressure of shell by rules 200 Size of manhole in shell 12' x 16"

e of compensating ring 13 x 39 x 1 1/2 No. and Description of Furnaces in each boiler 4 Monson Material Steel Outside diameter 51 1/2"
 length of plain part top 19" crown 19" bottom 32" Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 184.4 Combustion chamber plates: Material Steel Thickness: Sides 3/32" Back 3/32" Top 3/32" Bottom 4/8"
 ch of stays to ditto: Sides 7/2" x 7/2" Back 7/2" x 7/2" Top 7/2" x 8 3/4" If stays are fitted with nuts or riveted heads Rivetted heads Working pressure by rules 196

Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 56.25" Working pressure by rules 216 End plates in steam space:
 Material Steel Thickness 1 1/32" Pitch of stays 18" x 18" How are stays secured DN & Waken Working pressure by rules 184.8 Material of stays Steel

Area at smallest part 6.42" Area supported by each stay 324" Working pressure by rules 215.4 Material of Front plates at bottom Steel
 thickness 1/8" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 13" x 7/2" Working pressure of plate by rules 306

meter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 1/2" Material of tube plates Steel Thickness: Front 7/8" Back 3/32" Mean pitch of stays 9-125"
 ch across wide water spaces 13" Working pressures by rules 284 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9 1/2" x 1 1/8" Length as per rule 321 Distance apart 8 3/4" Number and pitch of stays in each 3-7 1/2"
 Working pressure by rules 228.8 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

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IS A DONKEY BOILER FITTED?

Yes ✓

If so, is a report now forwarded?

Yes ✓

SPARE GEAR. State the articles supplied:—1. Tail Shaft, 2 propeller blades, 1 section crank shaft, 1 piston rod, 1 set piston rings for H.P. I.P. & L.P., 1 valve spindle, 1 air pump rod, 1 bilge pump ram, 1 crank pin box, 1 crosshead pin-box, 2 crank pin and 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed, bilge and air pump valves, 1 set of valves for all auxiliaries, 20 boiler tubes, 20 condenser tubes, a quantity of assorted bolts and nuts, 1 ton of various sizes, 1 set propeller studs, 1 eccentric strap.

The foregoing is a correct description,
BETHLEHEM SHIPBUILDING CORPN., LTD. HARLAN PLANT

By *A. H. Smith*
ASSISTANT GENERAL MANAGER

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } Mar 14. May 10-16-23. June 1-5-13-21. Feb 14. Apr 17-23-30. May 9-20. June 3-17-27. July 1-8-11-17-30. Aug 7-13-19-21.
{ During erection on board vessel - - - } Sept 4-9-16-24-26. Oct 3-8-14-22-28. Nov 4-21-30. Dec 3-6
Total No. of visits 41

Is the approved plan of main boiler forwarded herewith *In New York*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 30-7-18 Slides 27-6-18 Covers 27-6-18 Pistons 27-6-18 Rods 7-8-18
Connecting rods 7-8-18 Crank shaft 1-7-18 Thrust shaft 9-9-18 Tunnel shafts 9-9-18 Screw shaft 27-8-18 Propeller 27-8-18
Stern tube 19-8-18 Steam pipes tested 26-9-18 Engine and boiler seatings 30-7-18 Engines holding down bolts 26-9-18
Completion of pumping arrangements 31-11-18 Boilers fixed 24-9-18 Engines tried under steam 21-11-18
Main boiler safety valves adjusted 30-11-18 Thickness of adjusting washers For boiler F. 1 1/16" A 1 1/16" For F. 1 1/2" A 1 1/16"

Material of Crank shaft Steel Identification Mark on Do. 2081-J.D. Material of Thrust shaft Steel Identification Mark on Do. 2081-J

Material of Tunnel shafts Steel Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 2681.

Material of Steam Pipes Seamless Steel ✓ Test pressure 570 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.

Is this machinery duplicate of a previous case.

Yes ✓

If so, state name of vessel

O.T. "Waring"
"O.T. Waring."

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

Pumps 1-12"x10"x12". 1-7 1/2"x4 1/2"x10". 1-8"x8" Duplex. 2-5 1/4"x3 1/2"x5". 2-10"x6"x10"
1-8"x8 1/2"x12". 1-8"x6"x12". 1-4 1/2"x2 3/4"x4"

The machinery of this vessel has been constructed and fitted on board under Special Survey, the workmanship is sound and good.

The Dahl oil fuel system has been fixed.

The machinery has all been tried under steam, and safety valves adjusted. oil fuel system tried and found ^{to work} well, and in my opinion eligible for the record of + LMC 12-18 fixed for oil fuel 12-18, flash point over 150°F. in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 12. 18. F.D.

Fitted for Oil fuel 12. 18. F.P. above 150°F.

The amount of Entry Fee ... £ 15 : 00 :
Special ... £ 232 : 00 :
Donkey Boiler Fee ... £ 25 : 00 :
Travelling Expenses (if any) £ 35 : 00 :
When applied for, Dec 21 1918
When received, 21/1/19

Wm. Tunham.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute New York DEC 31 1918

Assigned

+ LMC 12. 18

Fitted for oil fuel 12. 18. Flash point 150°F.

MACHINERY CERTIFICATE

WRITTEN 20/1/19.



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Foundation