

# REPORT ON MACHINERY.

No. 4061

apt. 4.

Date of writing Report

19

When handed in at Local Office 24-12-20

Port of Philadelphia

Received at London Office

JAN. 1921

No. in Survey held at Wilmington, Del.

Date, First Survey 23 May 1920. Last Survey 15 Dec 1920.

Reg. Book. on the S S "EUGENE V. R. THAYER."

(Number of Visits 20.)

Master R. Michaelson Built at Wilmington, Del By whom built Bethlehem S B Co. (Harlan Plant)

Engines made at Wilmington Del By whom made Bethlehem S B Co. (Harlan Plant) when made 1920.

Boilers made at " By whom made " when made "

Registered Horse Power Owners Sinclair Navigation Co. Port belonging to New York.

Nom. Horse Power as per Section 28 586. 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  $26\frac{1}{2} \times 44 \times 44$  Length of Stroke 51. Revs. per minute 40. Dia. of Screw shaft as per rule 15.3" as fitted 16" Material of screw shaft S

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 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 If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5'-2"

Dia. of Tunnel shaft as per rule 14" as fitted 14" Dia. of Crank shaft journals as per rule 14.4" as fitted 14.4" Dia. of Crank pin 14.4" Size of Crank webs 2'-5" x 10" Dia. of thrust shaft under

collars 14.4" Dia. of screw 18'-0" Pitch of Screw 14'-1" No. of Blades 4 State whether moveable Yes Total surface 95'

No. of Feed pumps 2 Diameter of ditto 10'-2" x 8" Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 5'-2" Stroke 24 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 4 Sizes of Pumps 6 x 5 1/4 x 6, 14 x 10 1/4 x 12, 6 x 5 3/4 x 6. No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2-3 1/2. Boiler room 2-3 1/2. In Holds, &c. 7 or 2 Cofferdam 2-3 1/2. Fore peak 1-3 1/2.

Lower deck 7 or 2 2-3 1/2 Dry cofferdams, each 2-3 1/2. Pump Room 2-3 1/2.

No. of Bilge Injections 1 sizes 10. 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

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks both

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

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 Dry cofferdam suction. How are they protected In oil bunker

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 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Lukens & Co. Bethlehem S. Co.

Total Heating Surface of Boilers 8829 Is Forced Draft fitted Yes. No. and Description of Boilers 3 Single end Scotch boilers.

Working Pressure 190 Tested by hydraulic pressure to 285. Date of test 8-9-20 No. of Certificate 479.

Can each boiler be worked separately Yes Area of fire grate in each boiler 641 DAHL BURNERS. No. and Description of Safety Valves to

each boiler 2 direct spring. Area of each valve 9.6. Pressure to which they are adjusted 190. Are they fitted with easing gear Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 4'-0". Mean dia. of boilers 15'-1 1/16 Length 11'-9". Material of shell plates S.

Thickness 1 1/16 Range of tensile strength 60000 41680. Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. L

long. seams T. R. D. B. S. Diameter of rivet holes in long. seams 1 1/16. Pitch of rivets 8". Lap of plates or width of butt straps 21".

Per centages of strength of longitudinal joint rivets 96.6 plate 87.6 Working pressure of shell by rules 220. Size of manhole in shell 12 x 16.

Size of compensating ring 2'-4 1/2 x 2'-11 1/2 No. and Description of Furnaces in each boiler 3 Morrison. Material S Outside diameter 4'-0".

Length of plain part top Thickness of plates crown 5/8 bottom 3/8 Description of longitudinal joint Lap weld No. of strengthening rings

Working pressure of furnace by the rules 205 Combustion chamber plates: Material S Thickness: Sides 21/32 Back 11/16 Top 21/32 Bottom 15/16.

Pitch of stays to ditto: Sides 7/16 x 7/16 Back 7/8 x 7/8 Top 7/4 x 7/4. If stays are fitted with nuts or riveted heads R. Heads. Working pressure by rules 209

Material of stays S. Area at smallest part 1.474. Area supported by each stay 7.375. Working pressure by rules 244. End plates in steam space:

Material S Thickness 1 1/8 Pitch of stays 16 3/4 x 16. How are stays secured D nuts. Working pressure by rules 202 Material of stays S

Area at smallest part 6.49 Area supported by each stay 16.752. Working pressure by rules 246 Material of Front plates at bottom S

Thickness 3/4. Material of Lower back plate S Thickness 3/4. Greatest pitch of stays 73" 1/2 Working pressure of plate by rules

Diameter of tubes 2 1/2 x 20 Pitch of tubes 3 1/8 x 3 1/8 Material of tube plates S Thickness: Front 3/4 Back 3/4 Mean pitch of stays 10 1/8 x 7 1/4

Pitch across wide water spaces 13" x 7 1/4 Working pressures by rules 214. Girders to Chamber tops: Material S. Depth and

thickness of girder at centre 2-10 x 7 1/4 Length as per rule 2'-10" Distance apart 4'-4". Number and pitch of stays in each 4-4".

Working pressure by rules 253 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

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

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

W35-0011



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— *Two Connecting Rod Top and Bottom and bearings with bolts and nuts complete. 2 Main bearing bolts and nuts. 1 Propeller Shaft. 2 Propeller blades. 1 Eccentric. 1 Set of rings and springs for each piston. 1 Set of valves for head and Bilge pumps. 1 Spare spring of each size used. Assorted bolts and nuts Iron of various sizes.*

The foregoing is a correct description,

BETHLEHEM SHREEDING CORP., LTD. HARLAN PLANT

*CB Jernan*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *May 23 June 11 23 29 July 12 Aug 5 27 Sept 27 30 Nov 5 Oct 7 14 Nov 11 15*  
{ During erection on board vessel -- } *Nov 23 29 Dec 1 13 14 15*  
Total No. of visits *20.*

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

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders *28.10.20.* Slides *27.9.20.* Covers *27.9.20.* Pistons *27.8.20.* Rods *27.8.20.*  
Connecting rods *27.9.20.* Crank shaft *24.8.20.* Thrust shaft *27.9.20.* Tunnel shafts *27.9.20.* Screw shaft *15.11.20.* Propeller *28.10.20.*  
Stern tube *5.11.20.* Steam pipes tested *15.11.20.* Engine and boiler seatings *28.10.20.* Engines holding down bolts *15.11.20.*  
Completion of pumping arrangements *1.12.20.* Boilers fixed *11.11.20.* Engines tried under steam *7.12.20.*  
Completion of fitting sea connections *28.10.20.* Stern tube *28.10.20.* Screw shaft and propeller *28.10.20.*  
Main boiler safety valves adjusted *7.12.20.* Thickness of adjusting washers *Check nuts*

Material of Crank shaft *S* Identification Mark on Do. *3473* Material of Thrust shaft *S* Identification Mark on Do. *3473*

Material of Tunnel shafts *S* Identification Marks on Do. *3473.* Material of Screw shafts *S* Identification Marks on Do. *3473*

Material of Steam Pipes *Solid drawn Steel* Test pressure *600 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.)

*The machinery of this vessel has been built under special survey in accordance with the approved plans. The materials and workmanship are good. The machinery has been tried under full power with satisfactory results.*

*In my opinion this vessel is eligible for record + LMC 12.20. with notation Fitted for Oil Fuel. 12.20. Flash point above 150°F. in the Register Book.*

*It is submitted that this vessel is eligible for*

*THE RECORD. + LMC. 12.20 FD*

*FITTED FOR. OIL FUEL. 12.20 FP ABOVE 150°F*

*Recd 26/1/21*

*DRR*

MACHINERY CERT  
WRITTEN 3/2/21  
dated 18/1/21

The amount of Entry Fee ... £ \$15.00 : When applied for,  
Special ... £ \$27.50 :  
Donkey Boiler Fee ... £ : When received,  
Travelling Expenses (if any) £ \$35.00 :  
15/1/21

*J. H. Avey*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York JAN - 4 1921

Assigned

*+ LMC 12.20*



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Foundation