

REC'D NEW YORK MAY 27 1921

pt. 4.

# REPORT ON MACHINERY

No. 3161 JUN 13 1921

Received at London Office

of writing Report 23<sup>rd</sup> May 1921 When handed in at Local Office 26 May 1921 Port of Baltimore Md

in Survey held at Baltimore Md Date, First Survey 22<sup>nd</sup> Sept 1920 Last Survey 28<sup>th</sup> April 1921

Book. on the S/s Henry Deutsch Dr. Co. Maurthe (Number of Visits 36)

ter C. A. P. Helsham Built at Sparrows Pt Md By whom built Bethlehem SB Corp. Tons Gross Net 1921

ines made at Sparrows Pt Md By whom made Bethlehem SB Corp. when made 1921

ers made at " " By whom made " " when made 1921

stered Horse Power 549 Owners Guy Navigation Co Port belonging to London

Horse Power as per Section 28 552 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

INES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 14.82 No. of Cranks 3

of Cylinders 27-45-74 Length of Stroke 48 Revs. per minute 79 Dia. of Screw shaft as per rule 14.333 as fitted 15.78 Material of screw shaft Steel

he 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

he 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

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

rs are fitted, is the shaft lapped or protected between the liners Length of stern bush 10' 7 1/2"

of Tunnel shaft as per rule 13.4 Dia. of Crank shaft journals as per rule 14.06 as fitted 14 1/2 Dia. of Crank pin 14 1/2 Size of Crank webs 27 1/2 x 9 1/2 Dia. of thrust shaft under

ars 14 1/2 Dia. of screw 17' 9" Pitch of Screw 17' 0" No. of Blades 4 State whether moveable No Total surface 100.8 sq ft

of Feed pumps 2 Diameter of ditto 9 Stroke 26 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 1 Sizes of Pumps 8 x 9 x 18 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 6-3 1/2' x 2-4 1/2' x 2-2' In Holds, &c. 2-3' x 3-2' x 2-2'

of Bilge Injections 1 sizes 10' Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 4 1/2"

e 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

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

e 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

e 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

hat pipes are carried through the bunkers none How are they protected

e all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

e the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges none return valves fitted

the Screw Shaft Tunnel watertight mach. aft. Is it fitted with a watertight door worked from

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

otal Heating Surface of Boilers 8358 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single Scotch

orking Pressure 180 lb Tested by hydraulic pressure to 320 Date of test Feb. 7<sup>th</sup> 15<sup>th</sup> 18<sup>th</sup> No. of Certificate 193, 194, 197

an each boiler be worked separately Yes Area of fire grate in each boiler 64.4 sq ft No. and Description of Safety Valves to

ch boiler 3 1/2 Duplex Area of each valve 9.62 sq ft 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 Mean dia. of boilers 15' 6" Length 11' 9 1/4" Material of shell plates Steel

Thickness 1 3/32 Range of tensile strength 60,000 Are the shell plates welded or flanged flanged Descrip. of riveting: cir. seams Double

ng. seams Suble Diameter of rivet holes in long. seams 1 7/16 Pitch of rivets 10" Lap of plates or width of butt straps 21 1/4"

er centages of strength of longitudinal joint rivets 85.84 plate 85.625 Working pressure of shell by rules 198.2 Size of manhole in shell 12 x 16"

ize of compensating ring 2' 6 3/8 x 2' 10 3/4 No. and Description of Furnaces in each boiler 3 mason Material Steel Outside diameter 49"

length of plain part top 7 3/8 bottom 7 7/8 Thickness of plates crown 19/32 Description of longitudinal joint Weld No. of strengthening rings none

Working pressure of furnace by the rules 192.7 Combustion chamber plates: Material Steel Thickness: Sides 21/32 Back 21/32 Top 21/32 Bottom 15/16

Pitch of stays to ditto: Sides 7 1/2 x 7 1/2 Back 7 x 7 1/2 Top 7 1/2 x 9 If stays are fitted with nuts or riveted heads Nuts & riveted heads Working pressure by rules 196

Material of stays Steel Area at smallest part 1.474 Area supported by each stay 7 1/2 x 7 1/2 Working pressure by rules 189 End plates in steam space:

Material Steel Thickness 1 1/8 Pitch of stays 16 1/2 x 18 How are stays secured Nuts Working pressure by rules 212.3 Material of stays Steel

Area at smallest part 5.94 Area supported by each stay 16 1/2 x 18 Working pressure by rules 245 Material of Front plates at bottom Steel

Thickness 1 1/8 Material of Lower back plate Steel Thickness 1 Greatest pitch of stays 7 1/2 x 7 1/2 Working pressure of plate by rules 282

Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 3/4 Material of tube plates Steel Thickness: Front 1 Back 21/32 Mean pitch of stays 7 1/2 x 7 1/2

Pitch across wide water spaces 13 1/2 Working pressures by rules 240 Girders to Chamber tops: Material Steel Depth and

ickness of girder at centre 9 1/4 x 15 1/4 Length as per rule 2 1 1/4 Distance apart 9 Number and pitch of stays in each 3 1/2

Working pressure by rules 216.12 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

UPERHEATER. 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

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IS A DONKEY BOILER FITTED? 110

If so, is a report now forwarded? —

SPARE GEAR. State the articles supplied:—1 Crank Complete. 1 propeller. 2 Top end brasses with bolts and nuts. 1 set of crank pin brasses with bolts & nuts. 2 main bearings-bolts & nuts. 1 set of coupling bolts & piston rod & nut. 1 Propeller shaft with nut & feather. 1 Slide rod complete. 1 link block with sliders & eccentric strap. 1 set each of rings & springs for H. P. Indier & L. P. pistons. 12 Studs & nuts for pistons. Bolts for guide shoes. 1 air pump rod & nut. 1 set of air pump guards & studs. 1 engine bilge pump plunger. 1 set of valves guards & springs for each independent pump. 20 Condenser tubes 50 Condenser ferrules. 1 piston rod & piston rings for one cargo pump. 2 Safety valve springs. 20 Boiler tubes. Springs for cylinder relief valves. Bars & plates of Iron.

The foregoing is a correct description.

BETHLEHEM SHIPBUILDING CO. LTD.

SPARROWS POINT PLANT

Geo. H. Hutton

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 22<sup>nd</sup> Sept. 1<sup>st</sup> 16<sup>th</sup> Oct. 13<sup>th</sup> 19<sup>th</sup> 29<sup>th</sup> Nov. 16<sup>th</sup> Dec. 1920 4<sup>th</sup> 6<sup>th</sup> 11<sup>th</sup> 17<sup>th</sup> 20<sup>th</sup> Jan. 7<sup>th</sup> 9<sup>th</sup> 13<sup>th</sup> 18<sup>th</sup> 25<sup>th</sup> Feb. 10<sup>th</sup> 11<sup>th</sup> 12<sup>th</sup> March 1921  
During erection on board vessel -- 14<sup>th</sup> 17<sup>th</sup> 18<sup>th</sup> 21<sup>st</sup> 23<sup>rd</sup> 25<sup>th</sup> 29<sup>th</sup> March 2<sup>nd</sup> 4<sup>th</sup> 6<sup>th</sup> 12<sup>th</sup> 16<sup>th</sup> 26<sup>th</sup> 27<sup>th</sup> 28<sup>th</sup> April 1921  
Total No. of visits Thirty Six

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 22 Sept. Slides 19 Nov. Covers 16 Oct. Pistons 16 Dec. Rods 16 Dec.  
Connecting rods 6 Jan. Crank shaft 3 Dec. Thrust shaft 11<sup>th</sup> Jan. Tunnel shafts 17<sup>th</sup> Jan. Propeller 28 Feb.  
Stern tube 6 Jan. Steam pipes tested 4<sup>th</sup> April Engine and boiler seatings 8<sup>th</sup> March. Engines holding down bolts  
Completion of pumping arrangements 25 February Boilers fixed March Engines tried under steam 16<sup>th</sup> April  
Completion of fitting sea connections 26<sup>th</sup> February Stern tube 28<sup>th</sup> February Screw shaft and propeller 10 March  
Main boiler safety valves adjusted 27<sup>th</sup> April Thickness of adjusting washers

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

Material of Tunnel shafts none Identification Marks on Do. — Material of Screw shafts C.H. Steel Identification Marks on Do. W.C.

Material of Steam Pipes Lap welded Steel Test pressure 360 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 & machines have been built under special survey from approved plans and from tested material workmanship & material are good. Boilers and machinery have been tried under steam pressure & found to work in a satisfactory manner. The machinery in this vessel is eligible in my opinion to have notation made in the Register Book.

✱ L.M.C. 5-21. Electric light. forced draught & fitted for the burning of oil fuel.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 4.21. FD CL.  
Fitted for oil fuel 4.21 FP above 150°F.

Roll

15/6/21.

The amount of Entry Fee ... £ 30.00 : When applied for, 21<sup>st</sup> May 1921  
Special ... £ 512.25 :  
Electric light fee ... £ 150.00 :  
Donkey Boiler Fee ... £ 20.00 :  
Travelling Expenses (if any) £ 20.00 : When received, 9. 11. 1921

H. Roseworthy  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York MAY 31 1921

Assigned + LMC 5.21

MACHINERY CERT.  
WRITTEN 27/6/21  
checked 13/6/21



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