

REPORT ON MACHINERY.

No. 2318

APR. 1918

REC'D NEW YORK March 16 1918

Received at London Office

Date of writing Report 13th 3rd 1918 When handed in at Local Office 14th 3rd 1918 Port of Baltimore Md.
 No. in Survey held at Sparrows Point, Md. Date, First Survey March 22nd 1917 Last Survey 27. 2. 1918.
 Reg. Book. on the Single Screw Steamer "Santore" (Number of Visits 49) Tons { Gross 7117
 Net 4498
 Master G. L. Wilson Built at Sparrows Point, Md. By whom built Bethlehem Shipbuilding Corp. When built 1918-3
 Engines made at Sparrows Point, Md. By whom made Bethlehem Shipbuilding Corp. when made 1918
 Boilers made at " " By whom made " " when made 1918.
 Registered Horse Power Owners One Steam Ship Corporation Port belonging to New York.
 Nom. Horse Power as per Section 28 559 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Triple expansion, reciprocating No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 26 1/2 - 46 - 76 Length of Stroke 48 Revs. per minute 14.625 Dia. of Screw shaft 15.185 Material of Cast Steel
 as per rule 15.185 as fitted 15.75 screw shaft
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No. 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 Electric Weld 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 Yes. If two
 liners are fitted, is the shaft lapped or protected between the liners Yes. Length of stern bush 5-5 1/2
 Dia. of Tunnel shaft 13.8 Dia. of Crank shaft journals 14.625 Dia. of Crank pin 14 7/8 Size of Crank webs 29 1/2 x 10 1/2 Dia. of thrust shaft under
 collars 14 5/8 Dia. of screw 13-0 Pitch of Screw 15-6 No. of Blades 4 State whether moveable Yes Total surface 104.39 sq. ft.
 No. of Feed pumps 2 Diameter of ditto 12 x 7 1/2 Stroke 24 Can one be overhauled while the other is at work Yes.
 No. of Bilge pumps 2 Attached Diameter of ditto 5 Stroke 18 Can one be overhauled while the other is at work Yes.
 No. of Donkey Engines 4 Sizes of Pumps 2 V.D. 12" x 8 1/2" x 12" 1 V.D. 12" x 7 1/2" x 24" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 1-3 1/2" Starboard side, 1-3 1/2" Centre, 1-3 1/2" Port side In Holds, &c. 1-3 1/2" No. 1. Hold: 1-3 1/2" No. 2 hold: 1-3 1/2" No. 3 hold.

No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size 1-3 1/2"
 Are all the bilge suction pipes fitted with roses Yes. Are the roses in Engine room always accessible Yes. Are the staves 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 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 Both.
 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 How are they protected
 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 Engine Aft. Is it fitted with a watertight door Yes. worked from Yes.

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Lukens Iron & Steel Coy. 3 S.B. Approved 16/4/18
 Total Heating Surface of Boilers 7931.4 sq. ft. Is Forced Draft fitted Yes. No. and Description of Boilers 3 Scotch.
 Working Pressure 200 lbs. Tested by hydraulic pressure to 300 lbs. Date of test 12.1.17 20.11.17 18 No. of Certificate 120, 121, 122.
 Can each boiler be worked separately Yes. Area of fire grate in each boiler 185.64 sq. ft. No. and Description of Safety Valves to
 each boiler 2 Direct Springs Area of each valve 9.62 sq. in. Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear Yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 16-4 1/2" Length 11-6" Material of shell plates S.
 Thickness 1 3/4" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. R. L.
 long. seams J. R. Butt Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 10.62 x 5.08 Lap of plates or width of butt straps 25 1/2 x 15 1/2
 Per centages of strength of longitudinal joint 97.3% Working pressure of shell by rules 218 lbs. Size of manhole in shell 20 3/4 x 16 3/4
 plate 83.39%
 Size of compensating ring 34 x 30 flanged No. and Description of Furnaces in each boiler 3 Morrison Material S. Outside diameter 49 1/4"
 Length of plain part top 7' 8" bottom 7' 8" Thickness of plates crown 7/8" bottom 7/8" Description of longitudinal joint Welded No. of strengthening rings 1
 Working pressure of furnace by the rules 204 lbs. Combustion chamber plates: Material S. Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 1 1/16"
 Pitch of stays to ditto: Sides 7 x 7 1/4" Back 7 1/4 x 7 1/4" Top 7 1/4 x 7 1/4" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 208 lbs.
 Material of stays S. Area at smallest part 1.394 sq. ft. Area supported by each stay 49.25 sq. in. Working pressure by rules 226 lbs. End plates in steam space:
 Material S. Thickness 1 1/8" Pitch of stays 14 1/2 x 14" How are stays secured D. Nut & Wash. Working pressure by rules 263 lbs. Material of stays S.
 Area at smallest part 5.41 sq. ft. Area supported by each stay 203.12 sq. in. Working pressure by rules 239 lbs. Material of Front plates at bottom S.
 Thickness 3/4 x 3/4" Material of Lower back plate S. Thickness 3/4 x 3/4" Greatest pitch of stays 15 1/2 x 15" Working pressure of plate by rules 257 lbs.
 Diameter of tubes 2 3/4" Pitch of tubes 4 1/2 x 3 7/8" Material of tube plates S. Thickness: Front 3/4 x 3/4" Back 3/4" Mean pitch of stays 8 1/8 x 7 3/4"
 Pitch across wide water spaces 13 5/8" Working pressures by rules 244 lbs. Girders to Chamber tops: Material S. Depth and
 thickness of girder at centre 9 3/4 x 1 3/4" Length as per rule 3-1" Distance apart 7 1/4" Number and pitch of stays in each 4 - 7"
 Working pressure by rules 244 lbs. 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 ✓
 Material of Safety Valve ✓ Pressure to which each is adjusted ✓ Is Easing Gear fitted ✓

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

For list of Spare gear see Baltimore Ltr 11. 6. 18

JWD
6/7/18

The foregoing is a correct description.

LEITHEN SHIPBUILDING CORP., LTD.
SPARROWS POINT PLANT

Asst. General Manager

Manufacturer.

Dates of Survey while building { During progress of work in shops -- March 22: May 2, 10, 18, 31: June 5, 12, 18, 20, 27, 30: August 1, 3, 7, 15, 29
During erection on board vessel -- Sept 20, 27, Oct 2, 8, 10, 22, 24, 30, Nov 8, 12, 15, 20, 23, 28, Dec 2, 10, 17, 20, 31: Jan 7, 9, 11, 14, 16, 29
Total No. of visits 27

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 17.8.17 Slides 17.8.17 Covers 17.8.17 Pistons 7.8.17 Rods 7.8.17
Connecting rods 7.8.17 Crank shaft 1.8.17 Thrust shaft 15.11.17 Tunnel shafts L Screw shaft 29.8.17 Propeller 29.8.17
Stern tube 31.12.17 Steam pipes tested 18.2.17 Engine and boiler seatings 11.2.18 Engines holding down bolts 11.2.18
Completion of pumping arrangements 26.2.17 Boilers fixed 28.2.17 Engines tried under steam 25.2.17
Completion of fitting sea connections 9.1.18 Stern tube 16.1.18 Screw shaft and propeller 29.1.18
Main boiler safety valves adjusted 27.2.18 Thickness of adjusting washers Port Boiler $5\frac{7}{16}$: A $1\frac{1}{2}$: Centre F $5\frac{1}{16}$: A $5\frac{1}{8}$: Starboard $5\frac{1}{16}$: A $1\frac{1}{2}$:
Material of Crank shaft Steel Identification Mark on Do. 3749.T. Material of Thrust shaft Steel Identification Mark on Do. 3759.T.
Material of Tunnel shafts Steel Identification Marks on Do. L Material of Screw shafts Steel Identification Marks on Do. Working 3769.T.
Material of Steam Pipes Lap welded Copper. Test pressure 500 lbs per sq inch Spare. 3779.T.

Is an installation fitted for burning oil fuel

Is the flash point of the oil to be used over 150° F.

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 S.S. Lutina + Sps. Feltora.

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

These engines and boilers have been installed in this vessel in an efficient manner. The same being examined under steam and worked satisfactorily.

Safety valves adjusted under steam rendering the vessel eligible for record + L.M.C. 2.18. Electric Light.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 2.18. F.D.

JWD
16/4/18

G.R.R.

The amount of Entry Fee ... \$ 15.00 :
Special ... \$ 240.00 :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) \$ 7.00 :
When applied for, 5.3.1918
When received, April 1918

Wm Stewart
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York MAR 19 1918

Assigned Elec. Light + LMC 2.18

MACHINERY DEPT
ENTERED 5-4-18



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Foundation