

REPORT ON MACHINERY.

No. 899.

REC'D NEW YORK

Feb. 28. 1917

Received at London Office MON. 26 MAR. 1917

Date of writing Report 23 Feb 1917 When handed in at Local Office 23 Feb 1917 Port of Boston
 No. in Survey held at Quincy, Mass. Date, First Survey 2 June 1916 Last Survey 17 Feb 1917
 Reg. Book. 5/s MIELERO (Number of Voids 15.)
 on the

Master F. Van Gilder Built at Quincy, Mass. By whom built Fore River S. B. Corporation When built 1917
 Engines made at Schenectady N.Y. By whom made General Electric Company when made 1917
 Boilers made at Buffalo, N.Y. By whom made Lake Erie Boiler Works when made 1917
 Registered Horse Power Owners Cuba Distilling Co Port belonging to New York
 Shaft Horse Power at Full Power Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes.

TURBINE ENGINES, &c.—Description of Engines Geared Turbine (Curtis type) No. of Turbines One
 Diameter of Rotor Shaft Journals, H.P. L.P. Diameter of Pinion Shaft 3.708 fitted 3.625
 Diameter of Journals Distance between Centres of Bearings Diameter of Pitch Circle
 Diameter of Wheel Shaft Distance between Centres of Bearings Diameter of Pitch Circle of Wheel 13.6 13.1
 Width of Face Diameter of Thrust Shaft under Collars 14.5 14.54 1/4 in. lined.
 No. of Screw Shafts one Diameter of same as per rule 14.8 14.54 1/4 in. lined. as fitted 14.3 1/6 Diameter of Propeller 17-6 Pitch of Propeller 16-3
 No. of Blades 4 State whether Moveable yes Total Surface 121.5 ft. Diameter of Rotor Drum, H.P. L.P. Astern
 Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine 3302 Propeller 75

PARTICULARS OF BLADING.

	H.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION									
2ND									
3RD									
4TH									
5TH									
6TH									
7TH									
8TH									

No. and size of Feed pumps Two independent 10" 7-24" Simpless, one 2 1/2" - one 2" injector
 No. and size of Bilge pumps Bilge + Ballast 9x5 1/2 x 10" duplex, Sanitary 6x6 1/2" duplex, Lux condenser pump 10x12 1/2" Simpless has a direct suction
 No. and size of Bilge suction in Engine Room 5-3 1/2"
 In Holds, &c. Oil cargo pumping system

No. of Bilge Injections One sizes 10" Connected to condenser, or to circulating pump Pump. Is a separate Donkey Suction fitted in Engine Room & size 4" 1/2
 Are all the bilge suction pipes fitted with roses. Yes Are the roses in Engine room always accessible Yes
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves + cocks
 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 Below
 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 bunks Bunker suction + deck steam pipes How are they protected Wooden casings + iron casings
 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 No Tunnel Is it fitted with a watertight door Yes worked from

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

Total Heating Surface of Boilers 7407 Is Forced Draft fitted Yes No. and Description of Boilers 3 single ended
 Working Pressure 190 lbs Tested by hydraulic pressure to 285 lbs Date of test 29 May 1916 No. of Certificate 64
 Can each boiler be worked separately Yes Area of fire grate in each boiler 55 ft. No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 9.3 sq. in. Pressure to which they are adjusted 190 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunks or woodwork 10" Mean dia. of boilers Length Material of shell plates
 Thickness Range of tensile strength Are the shell plates welded or flanged Description of riveting in shell plates
 long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
 Size of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter
 Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
 Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
 Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
 Working pressure by rules Steam dome: description of joint to shell % of strength of joint Diameter
 Thickness of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets
 Working pressure of shell by rules Crown plates: Thickness How stayed



Lloyd's Register Foundation

W862-0076

IS A DONKEY BOILER FITTED? no ✓ If so, is a report now forwarded? ✓

pump, spare boiler & condenser tubes, 1 set of check valves, spare oil fuel pump.

FORE RIVER SHIPBUILDING CORP., QUINCY, MASS. *Manufacturer.*

VICE PRESIDENT.

of Survey while building } During erection on } 1917 Jan 4, 11, 13, 19, Feb 2, 6, 8, 13, 15, 16, 17
board vessel - - - }
Total No. of visits 15. Is the approved plan of main boiler forwarded herewith *Copy Enclosed*

Dates of Examination of principal parts—Casings _____ ✓ *Rotors* _____ ✓ *Blading* _____ ✓ *Gearing* _____ ✓

Rotor shaft ✓ Thrust shaft 5 June 1916 Tunnel shafts ✓ Screw shaft 5 June 1916 Propeller 21 July 1917

Stern tube 11 Jan 1917. Steam pipes tested 20 Feb 1917 Engine and boiler seatings 19 Jan 1917 Engines holding down bolts 8 Feb 1917

Completion of muzzing arrangements 13 Feb 1917 Boilers fixed 2 Feb 1917 Engines tried under steam 17 Feb 1917

Completion of pumping arrangements

Main boiler safety valves adjusted 16th 17 Feb 1917 Thickness of adjusting washers Port F 1 $\frac{1}{4}$ A 1 $\frac{1}{4}$ Centre 1 $\frac{1}{4}$ 1 $\frac{5}{8}$ Stand F 1 $\frac{3}{8}$ A 1 $\frac{1}{4}$

Material of Wheel shaft	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.
		Material of Screen shaft	Identification Marks on Do.
		Steel	162

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

Material of Steam Pipes Steel lap welded Test pressure 150 lb

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. For answers please see Annex upon same.

Is this machinery a duplicate of a previous case. Yes ✓ If so, state name of vessel S/S Surusa, Boston report 259

General Remarks (State quality of workmanship, opinions as to class, &c. *The turbine reduction gear of this vessel*)

were built at Schenectady, N.Y. & the boilers at Buffalo, N.Y. under Special Survey in

accordance with the Rules & approved plans as per New York report 13421 & Cleveland report 13421.

with the Rules & approved plans & the material & workmanship are good. They have been

satisfactorily tried at sea under full power & in my opinion, the machinery & boilers of the

vessel are now in good & safe working condition & eligible to receive the notations
FD-150-20 ENCL 217 FPA30NE 150°F in the Register

FLMC 2.17 F.D. ✓ FITTED FOR CILFUEL 2.17. 1.1 ABOVE 100
It is submitted that

1 Geared Steam Turbine. this vessel is eligible for
 \$150,000. THE RECORD. + LMC 2.17. F.D.
 When applied for. Fitted for oil fuel 2.17 F.P. above 160° F.

Special $\frac{2}{3}$... £ 148.00 : 24 Feb 1917.

Donkey-Boiler Fee	...	£	:	:	When received,	19	3	17	5	x
Traveling Expenses (if any)	c	43.65								

Committee's Minute New York MAR 1 1917

Foundation

