

pt. 4.

REPORT ON MACHINERY.

No. 3394
TUE. DEC. 7 1920

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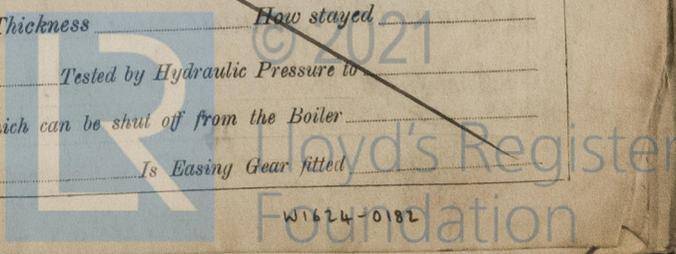
Port of **SAN FRANCISCO.**
 Date, First Survey **July 23rd** Last Survey **Nov. 3rd, 1920.**
 (Number of Visits **25**)
 on the **S.S. "ALGONQUIN"**
 Master **H.D. Clarke** Built at **Alameda, Cal.** By whom built **Bethlehem S.B. Corp.** When built **1920**
 Engines made at **Alameda, California** By whom made **Bethlehem Shipbuilding Corp.,** when made **1920**
 Boilers made at **Portland, Oregon.** By whom made **Willamette Iron & Steel Co.,** when made **1920**
 Registered Horse Power **600** Owners **Standard Transportation Co. of New York** belonging to **New York**

ENGINES, &c.—Description of Engines **Triple expansion** No. of Cylinders **3** No. of Cranks **3**
 Dia. of Cylinders **27"x47"x78"** Length of Stroke **48** Revs. per minute **82** Dia. of Screw shaft **15.5** Material of steel
 as per rule **15.5** as fitted **16.5** screw shaft
 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
 the propeller boss **Yes** If the liner is in more than one length are the joints burned **welded** 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'-6"**
 Dia. of Tunnel shaft **14.47** as per rule **14.47** as fitted **-** Dia. of Crank shaft journals **15.25** as per rule **15.25** as fitted **15.5** Dia. of Crank pin **15.5** Size of Crank webs **30x9 1/2** Dia. of thrust shaft under
 flanges **15.5** Dia. of screw **18'-0"** Pitch of Screw **17'-1"** No. of Blades **4** State whether moveable **Yes** Total surface **89.2 sq.ft.**
 No. of Feed pumps **2** Diameter of ditto **12x8** Stroke **24** Can one be overhauled while the other is at work **Yes**
 No. of Bilge pumps **2** Diameter of ditto **4 1/2** Stroke **24** Can one be overhauled while the other is at work **Yes**
 No. of Donkey Engines **3** Sizes of Pumps **6x4x6 Duplex** No. and size of Suctions connected to both Bilge and Donkey pumps
16x10x14 Duplex
 Engine Room **3 - 4"** Boiler room **3 - 4"** In Holds, &c. Connected to forward hold pump.
 Forepeak **1 - 3"** Fore hold **2 - 3"**
 No. of Bilge Injections **1** sizes **10"** Connected to condenser or to circulating pump **Cir. pump** a separate Donkey Suction fitted in Engine room of size **4"**
 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 **Valves**
 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 **above**
 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**
 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 **-** Is it fitted with a watertight door **No** worked from **-**

BOILERS, &c.—(Letter for record) Manufacturers of Steel **See Portland Report No.**
 Total Heating Surface of Boilers **8235sq'** Is Forced Draft fitted **Yes** No. and Description of Boilers **3 scotch marine** **171**
 Working Pressure **220 lbs.** Tested by hydraulic pressure to **330 lbs.** Date of test **-** No. of Certificate **172**
 Can each boiler be worked separately **Yes** Area of fire grate in each boiler **oil burner** No. and Description of Safety Valves to
 each boiler **3 1/2" duplex spring loaded** Area of each valve **19.24sq"** Pressure to which they are adjusted **220 lbs.** Are they fitted with easing gear **Yes**
 Greatest distance between boilers or uptakes and bunkers or woodwork **-** Mean dia. of boilers **-** Length **-** Material of shell plates
 Thickness **-** Range of tensile strength **-** Are the shell plates welded or flanged **-** Descrip. of riveting: **cir. seams**
 Long. seams **-** Diameter of rivet holes in long. seams **-** Pitch of rivets **-** Lap of plates or width of butt straps
 Percentages of strength of longitudinal joint **-** Working pressure of shell by rules **-** Size of manhole in shell **-**
 No. and Description of Furnaces in each boiler **-** Material **-** Outside diameter **-**
 Length of plain part **-** Thickness of plates **-** Description of longitudinal joint **-** No. of strengthening rings **-**
 Working pressure of furnace by the rules **-** Combustion chamber plates: Material **-** Thickness: Sides **-** Back **-** Top **-** Bottom **-**
 Thickness of stays to ditto: Sides **-** Back **-** Top **-** If stays are fitted with nuts or riveted heads **-** Working pressure by rules **-** End plates in steam space:
 Material of stays **-** Area at smallest part **-** Area supported by each stay **-** Working pressure by rules **-** Material of stays **-**
 Material **-** Thickness **-** Pitch of stays **-** How are stays secured **-** Working pressure by rules **-** Material of Front plates at bottom **-**
 Area 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 **-**
 Thickness 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 **-** Diam. of rivet holes **-**
 Thickness 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 **-**

Indo - 4 crane parts.



IS A DONKEY BOILER FITTED? Yes

If so, is a report now forwarded? Yes

pt. 5.

SPARE GEAR. State the articles supplied:— 1 Propeller shaft and nut. 2 bronze propeller blades. 3 hub studs. 1 section crank shaft. 1 valve stem. 1 piston rod. 1 set of piston rings for each piston. 2 connecting rod crank pin bolts and nuts. 2 connecting rod crosshead bolts and nuts. 1 air pump bucket and rod. 1 set of coupling bolts. 1 set crank pin brasses. 1 set crosshead brass. 2 main bearing bolts. 1 link block. 12 piston studs and nuts. 12 cylinder studs and nuts. 20 boiler tubes. 50 condenser tubes and 100 ferrules. 1 set of valves, springs, studs and nuts for each size pump aboard including bilge, fire, air, feed and fuel oil pumps. 1 impeller shaft. Large assortment of rods, bars, plates, washers, nuts, packing and gaskets.

The foregoing is a correct description.

BETHLEHEM STEEL BUILDING CORPORATION, LIMITED

UNION PLANT

Asst. General Manager

Manufacturer.

Dates of Survey while building: During progress of work in shops - July 23, 28, 29. Aug. 5, 11, 23, 27. Sept. 5, 8, 13. During erection on board vessel - Aug. 5, 11, 23, 24. Sept. 29. Oct. 5, 7, 12, 16, 19, 22, 30. Nov. 1, 3. Total No. of visits 25

Is the approved plan of main boiler forwarded herewith.

Dates of Examination of principal parts: Cylinders July 28, Slides Aug. 5, Covers Aug. 11, Pistons Sept. 8, Rods Aug. 23, Connecting rods Aug. 11, Crank shaft July 28, Thrust shaft Aug. 11, Tunnel shafts Sept. 29, Propeller Aug. 11, Stern tube Aug. 11, Steam pipes tested Oct. 19, Engine and boiler seatings Sept. 29th, Engines holding down bolts Oct. 30th, Completion of pumping arrangements Oct. 32nd, Boilers fixed Sept. 29th, Engines tried under steam Oct. 30th, Completion of fitting sea connections Aug. 11th, Stern tube Aug. 11th, Screw shaft and propeller Aug. 23rd, Main boiler safety valves adjusted Nov. 3rd, Thickness of adjusting washers Locknuts

Material of Crank shaft steel, Identification Mark on Do. Lloyd's No. 2357 R.S., Material of Thrust shaft steel, Identification Mark on Do. Lloyd's No. 2361 R.S., Material of Tunnel shafts -, Identification Marks on Do. -, Material of Screw shafts steel, Identification Marks on Do. See below, Material of Steam Pipes steel, Test pressure 6.60

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 Yes, If so, state name of vessel "Wm. H. Doheny" S.F. Rpt. No. 3389

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

Screw Shafts

Lloyd's No. 2360 R.S., Lloyd's No. 2365 R.S.

The machinery of this vessel were constructed under special survey of material tested to Rule Requirements and the workmanship was found good throughout. On completion the machinery was thoroughly tested under working conditions with satisfactory results and in the opinion of the undersigned the machinery is eligible to be classed in the Register Book * LMC 11-20. Fitted for Fuel Oil 11-20. F.P. above 150°F. Electric Light.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 11.20. F.D. FITTED. FOR. OIL. FUEL 11-20 FP above 150°F.

MACHINERY CERT. WRITTEN 7.12.20

1/3 of Mach. fee (or \$34.00) to be cred. Portland, Ore. their Boiler Rpt. No. 599.

The amount of Entry Fee ... \$ 15.00, Special ... \$ 250.00, Donkey Boiler Fee ... \$ 35.00, Travelling Expenses (if any) \$ 5.85

When applied for, Nov. 13, 1920

When received, Dec 13, 1920

W. V. Rawson, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York NOV 23 1920

Assigned + d.m.b. 11.20



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