

REPORT ON MACHINERY.

REC'D NEW YORK

April 24 1917

Received at London Office

MAY 1917

Date of writing Report Apr. 18th 17 When handed in at Local Office

in Port of SAN FRANCISCO,

No. in Survey held at Alameda, California.

Date, First Survey May 1/1916

Last Survey Apr. 6th 1917

Reg. Book. 52 on the s/s "REGULUS", Hull No. 16,

(Number of Visits forty (40))

Tons Gross 3911

Net 2490

Master P. Svendsen, Built at Alameda, Cal. By whom built Union Iron Works Co. (Alameda Branch)

When built 1917

Engines made at Alameda, Cal. By whom made Union Iron Works Company.

when made 1917

Boilers made at Seattle, Wash. By whom made Commercial Boiler Works.,

when made 1916

Registered Horse Power Owners A.O. Lindvig, Christiania, Nor. Port belonging to Christiania.

Nom. Horse Power as per Section 28 234 325. Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Triple Expansion. No. of Cylinders three No. of Cranks three

Dia. of Cylinders 24x39x65 Length of Stroke 42 Revs. per minute 80 Dia. of Screw shaft 13.5 as per rule 12.6 Material of screw shaft steel as fitted 14"

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 -

Dia. of Tunnel shaft 11.77 as per rule 12.36 Dia. of Crank shaft journals 13" as fitted 13" Dia. of Crank pin 13" Size of Crank webs 46 1/2 x 25 1/2 Dia. of thrust shaft under collars 13" Dia. of screw 17'0" Pitch of Screw 15'3" No. of Blades 4 State whether moveable solid Total surface 90.4 sq. ft.

No. of Feed pumps 2 Diameter of ditto 3 7/8" Stroke 21" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 7/8" Stroke 21" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 1-12x8 1/2 x 12 1-10x6x12 No. and size of Suctions connected to both Bilge and Donkey pumps Duplex

In Engine Room 4-3 1/2" Boiler Rm. 2-3 1/2" In Holds, &c. Fore Peak 1-3" No. 1 Hold 2-3 1/2" No. 2 Hold 2-3 1/2" No. 3 Hold 4-3 1/2" No. 4 hold 2-3 1/2" After Well 1-3" After Peak 1-3"

No. of Bilge Injections 1 sizes 7" Connected to condenser for circulating pump yes Is a separate Donkey Suction fitted in Engine room of 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 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

What pipes are carried through the bunkers none 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

Dates of examination of completion of fitting of Sea Connections Feb. 19th of Stern Tube Mar. 19th Screw shaft and Propeller Mar. 19th

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from deck.

OILERS, &c.—(Letter for record (7)) Manufacturers of Steel 2 SB.

Total Heating Surface of Boilers 5400 Is Forced Draft fitted no No. and Description of Boilers 2-Scotch Marine type.

Working Pressure 180 lbs. Tested by hydraulic pressure to - Date of test - No. of Certificate -

Can each boiler be worked separately yes Area of fire grate in each boiler 72 sq. ft. No. and Description of Safety Valves to each boiler 2-spring loaded Area of each valve 7.06 sq" Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear yes

Smallest 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 -

Per centages of strength of longitudinal joint - 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 - 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 -

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 -

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 - Superheater or Steam chest; how connected to boiler - Can the superheater be shut off and the boiler worked -

separately - Diameter - Length - Thickness of shell plates - Material - Description of longitudinal joint - Diam. of rivet -

plates - Pitch of rivets - Working pressure of shell by rules - Diameter of flue - Material of flue plates - Thickness -

If stiffened with rings - Distance between rings - Working pressure by rules - End plates: Thickness - How stayed -

Working pressure of end plates - Area of safety valves to superheater - Are they fitted with easing gear -

W/157-0190



IS A DONKEY BOILER FITTED? Scotch Marine type. If so, is a report now forwarded? Yes. Seattle Rpt.

SPARE GEAR. State the articles supplied:— 2-bottom end bolts and nuts. 2-top end bolts and nuts. 2-main bearing bolts. 1-set of coupling bolts and nuts. Set of feed and bilge pump valves. Spare tail shaft and nut. Spare solid cast iron propeller. 1/2 cwt. of Iron Plate. 1/2 cut of Iron Bars. Quantity of assorted bolts and nuts.

The foregoing is a correct description,

UNION IRON WORKS COMPANY,

By Scott Wallace Engineer-in-Chief.

Manufacturer.

Dates of Survey while building: During progress of work in shops - May 1-24 June 13-14-27-30 July 13 Aug 1-11-14-17-21-24 Oct 3-5-7-13-16-19-28 Nov. 6-11-23-29 Dec 5-11-19-28, 1916. During erection on board vessel - Jan. 23 Feb. 8-16-19-20 Mar 1-9-19-26-27 Apr. 5-6, 1917. Total No. of visits forty (40)

Is the approved plan of main boiler forwarded herewith yes

Is the approved plan of donkey boiler forwarded herewith yes

Dates of Examination of principal parts: Cylinders Aug. 1-21 Slides Nov. 29 Covers Nov. 29 Pistons Nov. 29 Rods Nov. 29 Connecting rods Nov. 29 Crank shaft June 27 Thrust shaft Aug. 24 Tunnel shafts Dec. 28 Screw shaft Nov. 6 Propeller Nov. 11 Stern tube Aug. 14 Steam pipes tested Feb. 20 Engine and boiler seatings Jan. 23 Engines holding down bolts Mar. 27 Completion of pumping arrangements Mar. 19 Boilers fixed Feb. 8 Engines tried under steam Mar. 26 Main boiler safety valves adjusted April 5 Thickness of adjusting washers Locknuts.

Material of Crank shaft steel Identification Mark on Do. JSB No. 588 Material of Thrust shaft steel Identification Mark on Do. RB No. 8-16

Material of Tunnel shafts steel Identification Marks on Do. * Material of Screw shafts steel Identification Marks on Do. RB No. 8-16

Material of Steam Pipes steel Test pressure 650 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 Boilers and Machinery of this vessel have been built under special survey of materials tested to rule requirements, and workmanship found sound throughout. On completion the Machinery was thoroughly tested under working conditions and found satisfactory. In the opinion of the undersigned the machinery is eligible to be classed in the Register Book with record of LMC 4-17 Fitted for Oil Fuel 4-17 F.P. above 150°F. Electric Light Wireless.

It is submitted that this vessel is eligible for THE RECORD. + LMC 4.17.

Fitted for oil fuel 4.17. F.P. above 150°F.

JWD. 16/5/17. ARK

Table with columns for fee type (Entry Fee, Special, Donkey Boiler Fee, Eng. Steel Forgings, Travelling Expenses, Castings) and amounts in dollars and pounds.

Signature of J. Blackett, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute New York APR 26 1917 Assigned + Lmc 4.17 Fitted for oil fuel 4.17 Elec. Light

