

Rpt. 4.

REPORT ON MACHINERY

No. 633

MAN. 13 JUN 1921

Received at London Office

Date of writing Report May 16 1921 When handed in at Local Office May 23 1921 Port of Portland, Oregon

No. in Survey held at Vancouver, Washington Date, First Survey Jan. 4 '21 Last Survey May 10 1921

Reg. Book. on the Steel Single Screw Oil Tank Steamer "CALGAROLITE" (Number of Visits 23) Tons { Gross 8215.85 Net 5165.63

Master C. M. Rowley Built at Vancouver, Wash. By whom built G.M. Standifer Const. Corp. When built 1921

Engines made at Los Angeles, Calif. By whom made Llewellyn Iron Works when made 1921

Boilers made at Seattle, Wash. By whom made Commercial Boiler Works when made 1921

Registered Horse Power _____ Owners The Imperial Oil, Limited. Port belonging to Sarnia, Ontario.

Nom. Horse Power as per Section 28 581 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple expansion No. of Cylinders 4 No. of Cranks 4

Dia. of Cylinders 24, 35, 51, 75" Length of Stroke 51" Revs. per minute 82 Dia. of Screw shaft as per rule 14.75 Material of screw shaft Steel

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 Yes If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5'-0"

Dia. of Tunnel shaft as per rule 13.48 as fitted 13 1/2 Dia. of Crank shaft journals as per rule 14.16 as fitted 14 1/4 Dia. of Crank pin 14 1/2 Size of Crank webs 54 1/2 x 30 x 9 1/2 Dia. of thrust shaft under collars 14 1/2 Dia. of screw 17.6 Pitch of Screw 17.6 No. of Blades 4 State whether moveable Yes Total surface 97.96 sq. ft.

No. of Feed pumps 3 Diameter of ditto 12" x 8" Stroke 24" Can one be overhauled while the other is at work Yes No. of Bilge pumps 2 Diameter of ditto 3 1/4" Stroke 24" Can one be overhauled while the other is at work Yes No. of Donkey Engines 1 Sizes of Pumps 8 1/2" x 8" x 12" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four of 3 1/2" In Holds, &c. Stokehold two of 3 1/2"

No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Sir. P. Is a separate Donkey Suction fitted in Engine room & size No 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 Yes Are all connections with the sea direct on the skin of the ship on Sea Stools 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 Yes 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 Yes Is it fitted with a watertight door worked from The Screw Shaft Liner is in two lengths burned together to full depth.

BOILERS, &c.—(Letter for record U) Manufacturers of Steel 3 SB

Total Heating Surface of Boilers 8086 Is Forced Draft fitted Yes No. and Description of Boilers 3 SB Working Pressure 220 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 Oil burning No. and Description of Safety Valves reduced to 195 lbs. by Canadian Authorities each boiler 2 Spring Duplex Area of each valve 8.29 Pressure to which they are adjusted 220 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 _____ Area at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space: _____ Material _____ Thickness _____ Pitch of stays _____ Horizontal stays secured _____ Working pressure by rules _____ Material of stays _____ 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 _____ 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 _____ Diam. of rivet holes _____ Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

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IS A DONKEY BOILER FITTED? Yes If so, is a report now forwarded? Yes

SPARE GEAR. State the articles supplied:— 2 Top End Bolts & Nuts, 2 Bottom End Bolts & Nuts, 2 Main Bearing Bolts & Nuts, 1 set Coupling Bolts & Nuts, 1 set of Piston Springs and Rings for each Piston, 1 set of Valves each for Air, Circulating, Feed and Bilge Pumps, 1 pair Crosshead Brasses, 1 pair Crank Pin Brasses, H.P. I.P. & L.P. Valve Stems and eccentric straps, 2 Air Pump Links, 1 Crank Shaft, 1 Propeller Shaft and Nut, 1 Cast Iron Propeller Boss and 2 Bronze Blades, 1 set Stud and Nuts for 1 Blade, 25 Boiler Tubes, 25 Condenser Tubes and 100 Ferrules.

The foregoing is a correct description,

*Honors. Prof Eng. for
G.M. Standiger Const. Corp.*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } Jan. 4. Feb. 28. Mar. 2, 11, 12, 15, 16, 21, 23, 25. Apr. 4, 5, 6, 7, 15, 20, 21, 25. May
{ During erection on board vessel - - - } 2, 5, 7, 9, 10.
Total No. of visits 23.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders ✓ Slides ✓ Int. Covers ✓ Pistons ✓ Rods ✓
Connecting rods ✓ Crank shaft May 9 Thrust shaft Apr. 21 Tunnel shafts Apr. 21 Screw shaft Apr. 7 Propeller Apr. 7
Stern tube Apr. 5 Steam pipes tested Apr. 25 Engine and boiler seatings Apr. 4 Engines holding down bolts Apr. 20
Completion of pumping arrangements Apr. 4 Boilers fixed Apr. 20 Engines tried under steam May 7
Completion of fitting sea connections Apr. 4 Stern tube Apr. 5 Screw shaft and propeller Apr. 7
Main boiler safety valves adjusted May 14 by Canadian Government Authorities Thickness of adjusting washers ✓
Material of Crank shaft Steel Identification Mark on Do. Lloyd's 1075 25.3.21 WS (91) Material of Thrust shaft Steel Identification Mark on Do. Lloyd's 1076 25.3.21 WS
Material of Tunnel shafts Steel Identification Marks on Do. 998AWL 23.11.20 Material of Screw shafts Steel Identification Marks on Do. 1011 AWL 12.11.20 Spare Do. 1001AWL 30.11.20
Material of Steam Pipes O. H. Lapwelded Steel Test pressure 660 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 Quadruple Expansion Engines have been constructed under Special Survey at Los Angeles, California and installed at Vancouver, Washington.

The Boilers have been constructed at Seattle, Washington, under Special Survey and installed at Vancouver, Washington.

It is submitted that the record of ~~LMC~~ 5-21 Electric Light be made in the Register Book in the case of this Vessel.

This Vessel's machinery has been constructed to the approved plans and to comply with the Rules of the Society in force when the contract was signed. The Vessel has now been transferred to Canadian Registry and the Government Rules to date applied.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 5-21 FD CL Fitted for bil Fuel 5.21. FP above 150°F.

Rock 16/10/21

J. A. Yates

The amount of Entry Fee ... \$ 30: 00 : When applied for,
1/5th Special ... \$ 104: 05 : May 12 1921
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) \$ 20: 00 : 24/5/21 1921

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York MAY 31 1921

Assigned + LMC. 5-21

CERTIFICATE WRITTEN.



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Lloyd's Register Foundation

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.