

Rpt. 4.

REC'D NEW YORK MAR 10 1921

REPORT ON MACHINERY.

No. 624

Date of writing Report Mar. 3 19 21 When handed in at Local Office March 5 19 21 Port of Portland, Oregon
No. in Survey held at Portland, Oregon. Date, First Survey June 1, 1920 Last Survey February 25 19 21
Reg. Book. on the Steel Single Screw Oil Tank Steamer "SWIFTSURE" (Number of Visits 47)

Master A.A. Sawyer Built at Portland, Ore. By whom built Northwest Bridge & Iron Co. When built 1921
Engines made at Hamilton, Ohio By whom made Hooven, Owens & Rentschler Co. when made 1920
Boilers made at Portland, Oregon By whom made Smith-Bowles Boiler Co. when made 1921
Registered Horse Power Owners Swiftsure Oil Transport Co. Port belonging to New York
Nom. Horse Power as per Section 28 662 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple ExpansionNo. of Cylinders 3 No. of Cranks 3Dia. of Cylinders 27 1/2, 46, 78" Length of Stroke 51" Revs. per minute 77 Dia. of Screw shaft 15.6" Material of 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'-5"

Dia. of Tunnel shaft 14.6" Dia. of Crank shaft journals 15.3" Dia. of Crank pin 16 1/2" Size of Crank webs 30 1/2 x 10-1/8"
collars 16" Dia. of screw 18 ft. Pitch of Screw 17 ft. No. of Blades 4 State whether moveable Yes Total surface 98.56 sq. ft.No. of Feed pumps 2 Independent Diameter of ditto 12"x8" Stroke 24" Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work YesNo. of Donkey Engines in E.R. 2. Sizes of Pumps 14x9x12, 6x7x6 No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 3 of 3 1/2" In Holds, &c. Fwd. 2 of 3". In Fwd. Pump Room 2 of 3".No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Cir. P. Is a separate Donkey Suction fitted in Engine room & 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 accessibleAre all connections with the sea direct on the skin of the ship on Sea Stools Are they Valves or Cocks Valves and CocksAre 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 aboveAre 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 YesWhat pipes are carried through the bunkers None How are they protectedAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesThe Screw Shaft Liner is fitted in three lengths burned together to full depth of Liner. YesIs the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door worked fromBOILERS, &c.—(Letter for record S) Manufacturers of Steel Illinois Steel CompanyTotal Heating Surface of Boilers 9690 Is Forced Draft fitted Yes No. and Description of Boilers 3 Scotch Single EndedWorking Pressure 210 lbs. Tested by hydraulic pressure to 315 lbs. Date of tests 1.24.21 No. of Certificates 213, 214, 215Can each boiler be worked separately Yes Area of fire grate in each boiler Oil Burning No. and Description of Safety Valves toeach boiler 2-4" spring loaded Area of each valve 12.56 sq. in. Pressure to which they are adjusted 210 lbs. Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 11 ft. to Bunker Mean dia. of boilers 15' 5 1/2" Length 11' 9" Material of shell plates SteelThickness 1-5/8" Range of tensile strength 60,000 to 71,680 lbs Are the shell plates welded or flanged flanged Descrip. of riveting: cir. seams D.R.long. seams Double Diameter of rivet holes in long. seams 1-11/16" Pitch of rivets 10" & 5" Lap of plates or width of butt straps 24"Per centages of strength of longitudinal joint 97.49 Working pressure of shell by rules 228.5 lbs. Size of manhole in shell 12" x 16"Size of compensating ring Hd. Flanged No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 51-3/8"Length of plain part top 11/16" Thickness of plates bottom 11/16" Description of longitudinal jointWorking pressure of furnace by the rules 234.2 Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 1"Pitch of stays to ditto: Sides 7 3/4 x 7 1/4" Back 7 1/2 x 7 1/2" Top 8 1/2 x 7 1/2" If stays are fitted with nuts or riveted heads Riveted Hds. Working pressure by rules 215Material of stays Steel Area at smallest part 1.755 sq. in. Area supported by each stay 56.25 Working pressure by rules 249 End plates in steam space:Material Steel Thickness 1 1/4" Pitch of stays 17 1/2 x 18 1/2" How are stays secured Double Nuts Working pressure by rules 215.8 Material of stays SteelArea at smallest part 8.94 sq. in. Area supported by each stay 323.75 Working pressure by rules 287 Material of Front plates at bottom SteelThickness 13/16" Material of Lower back plate Steel Thickness 11/16" Greatest pitch of stays 7" x 13" Working pressure of plate by rules 234Diameter of tubes 2 1/2" Pitch of tubes 3 1/2" x 3-5/8" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 8-7/8"Pitch across wide water spaces 13 1/2" Working pressures by rules 242 Girders to Chamber tops: Material Steel Depth andthickness of girder at centre 11 1/2" x 3/4" Length as per rule 35" Distance apart 8 3/4" Number and pitch of stays in each 4 at 7 1/2"Working pressure by rules 223 Steam dome: description of joint to shellDiameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesPitch of rivets Working pressure of shell by rules Crown plates Thickness How stayedSUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure toDate of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the BoilerDiameter 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:— 2 Top End Brasses with Bolts & Nuts, 2 Bottom End Brasses with Bolts & Nuts, 2 Main Bearing Bolts & Nuts, 2 Sets of Coupling Bolts & Nuts, set of Valves for Air Circulating Feed and Bilge Pumps, set of rings for H.P. I.P. & L.P. Pistons, Air Pump Rod, Main Valve Spindle, set of Link Block Brasses, set of H.P. Piston Valve Rings, Studs for Pistons Cylinder Covers, Valve Chests, 1 Spare Propeller Shaft, 1 Propeller Boss and 2 Blades, 50 Condenser Tubes and 100 Ferrules, 20 Boiler Tubes, a quantity of assorted Bolts and Nuts and Iron of various sizes.

The foregoing is a correct description,

*Northwest Bridge & Iron Co.,
by J. Merrill,*

Manufacturer.

Dates of Survey while building { During progress of work in shops - - June 1, 10, July 3, 21, Aug. 9, 11, 26, Sept. 13, 15, 17, 23, 28, Oct. 4, 6, 11, 16, 20, 27, Nov. Dec. 7, 14, 20, 26, Jan. 5, 6, 7, 8, 11, 17, 18, 19, 20, 21, 22, 24, 25, 26, 28, 29, Feb. 1, 3, 12, 18, 23, 24, 25.
During erection on board vessel - - -
Total No. of visits 47.

Is the approved plan of main boiler forwarded herewith No

" " " donkey " " " No

Dates of Examination of principal parts—Cylinders ✓ Slides ✓ Covers ✓ Pistons ✓ Rods ✓
Connecting rods ✓ Crank shaft Feb. 25 Thrust shaft Feb. 18 Int. Tunnel shafts Feb. 18 Screw shaft Feb. 3 Propeller Feb. 3
Stern tube Feb. 3 Steam pipes tested Feb. 12 Engine and boiler seatings Feb. 12 Engines holding down bolts Feb. 12
Completion of pumping arrangements Feb. 3 Boilers fixed Feb. 4 Engines tried under steam Feb. 24
Completion of fitting sea connections Feb. 3 Stern tube Feb. 3 Screw shaft and propeller Feb. 1
Main boiler safety valves adjusted Feb. 21 Thickness of adjusting washers Check Nuts
Material of Crank shaft Steel Identification Mark on Do. Lloyd's G.D. 4803 Material of Thrust shaft Steel Identification Mark on Do. Lloyd's 3623
Material of Tunnel shafts Steel Identification Marks on Do. 16.7.20 Material of Screw shafts Steel Identification Marks on Do. 4798
Material of Steam Pipes O. H. Lapwelded Steel Test pressure 630 lbs. Spare Do. 28.7.2
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 S. S. "SWIFTARROW"

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

The Triple Expansion Engines have been constructed under Special Survey at Hamilton Ohio, and installed at Portland, Oregon.

The Boilers have been constructed and installed at Portland, Oregon, under Special Survey in accordance with the Rules.

It is submitted that the record of LMC 2-21 Electric Light be made in the Register Book in the case of this vessel.

*It is submitted that
this vessel is eligible for
THE RECORD. + LMC. 2.21. F.D. CL.
Fitted for Oil Fuel 2.21 BP above 150°F.*

Rell

14/4/21

J.R.A.

The amount of Entry Fee ... \$ 30.00
Special ... \$ 541.00
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) \$ 140.00

When applied for,

Mar. 3 1921.

When received,

22/4/21

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York MAR 15 1921

Assigned + Lmc. 2.21

MACHINERY CERT.
WRITTEN 15/4/21
dated 6/4/21



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Lloyd's Register
Foundation