

Rpt. 4.

REPORT ON MACHINERY.

No. 626

Received at London Office

WED. MAY. 11 1921

Date of writing Report April 1 1921 When handed in at Local Office April 9 1921 Port of Portland, Oregon.

No. in Survey held at Portland, Oregon. Date, First Survey July 21, 1920 Last Survey March 30 1921
Reg. Book. (Number of Visits 38)

on the Steel Single Screw Oil Tank Steamer "SWIFISCOUT" Tons } Gross 8206.61
Net 5091.70

Master W.J.H. Stofen 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 1921

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 Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27 1/2", 46", 78" Length of Stroke 51" Revs. per minute 72 Dia. of Screw shaft as per rule 15.6" Material of Steel
as fitted 16-3/8" screw shaft

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 Length of stern bush 5'-5"

Dia. of Tunnel shaft as per rule 14.6 Dia. of Crank shaft journals as per rule 15.3" Dia. of Crank pin 16 1/4" Size of Crank webs 30 1/2 x 10-1/8"
as fitted 15-1/8" as fitted 16"

collars 16" Dia. of screw 18 ft. Pitch of Screw 18 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 Yes

No. of Bilge pumps 2 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines in E.R. 2 Sizes of Pumps 14"x9"x12", 6"x7"x6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 of 3 1/2" In Holds, &c. Fwd. 2 of 3". In Fwd. Pump Room 2 of 3"

In Main Pump Room 2 of 3 1/2". 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 accessible

Are all connections with the sea direct on the skin of the ship on Sea Stools Are they Valves or Cocks Valves and 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 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

The Screw Shaft Liner is fitted in three lengths burned together to full depth of Liner. Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

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

Total Heating Surface of Boilers 9690 Is Forced Draft fitted Yes No. and Description of Boilers 3 Scotch Single Ended

Working Pressure 210 lbs. Tested by hydraulic pressure to 315 lbs. Dates of tests 2.11.21 Nos of Certificates 218, 221, 222.
2.16.21
2.23.21

Can each boiler be worked separately Yes Area of fire grate in each boiler Oil Burning No. and Description of Safety Valves to

each boiler 2-4" spring loaded Area of each valve 12.56sq. in. Pressure to which they are adjusted 210 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 11 ft. to Mean dia. of boilers 15'-5 1/2" Length 11'-9" Material of shell plates Steel

Thickness 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 Triple Riveted 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 rivets 97.49 Working pressure of shell by rules 228.5 lbs. Size of manhole in shell 12" x 16"
plate 83.928

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 crown 11/16" Description of longitudinal joint No. of strengthening rings
bottom 11/16"

Working 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 3/4 x 7 1/4 If stays are fitted with nuts or riveted heads Riveted Hds Working pressure by rules 215

Material of stays Steel Area at smallest part 1.755sq. in. Area supported by each stay 56.25 sq. in. 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 Steel

Area 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 Steel

Thickness 13/16" Material of Lower back plate Steel Thickness 11/16" Greatest pitch of stays 7" x 13" Working pressure of plate by rules 234

Diameter 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 and

thickness 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 1/4"

Working pressure by rules 223 Steam dome: description of joint to shell % of strength of joint

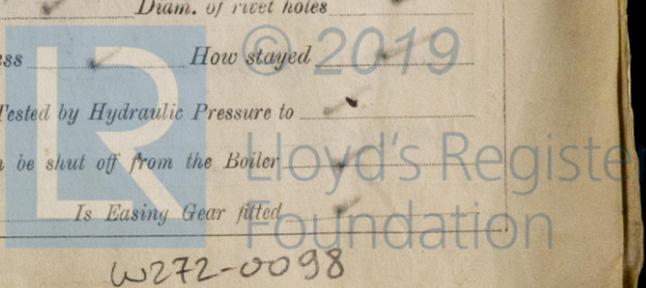
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

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



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 D. Merrill, Manufacturer.

1920
Dates of Survey while building: During progress of work in shops -- July 21, AUG. 26, Sept. 13, 23, Oct. 16, 20, 27, Nov. 29, Dec. 7, 14, 20, Jan. 11, 20, Feb. 1, 4, 11, 14, 16, 21, 23, 25, 28, Mar. 3, 5, 7, 8, 10, 15, 17, 18, 20, 22, 23, 25, 26, 28, 29, 30.
Total No. of visits 38.

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 Mar. 29 Thrust shaft Mar. 17 Tunnel shafts Mar. 17 Screw shaft Mar. 15 Propeller Mar. 15
Stern tube Mar. 8 Steam pipes tested Mar. 25 Engine and boiler seatings Mar. 10 Engines holding down bolts Mar. 17
Completion of pumping arrangements Mar. 10 Boilers fixed Mar. 15 Engines tried under steam Mar. 28 & 29
Completion of fitting sea connections Mar. 3 Stern tube Mar. 3 Screw shaft and propeller Mar. 15
Main boiler safety valves adjusted Mar. 26 Thickness of adjusting washers Check Nuts
Material of Crank shaft Steel Identification Mark on Do. GD Lloyd's 3643 GD
Material of Tunnel shafts Steel Identification Marks on Do. 4820 Lloyd's 4799
Material of Steam Pipes O. H. Lapwelded Steel Test pressure 630 lbs. Spare Do. 4819 20.8.20
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. "SWIFTSTAR"

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 3-21 Electric Light be made in the Register Book in the case of this Vessel.

It is submitted that this vessel is eligible for TERN BOARD. + LMC. 3.21. F.D. CL. Fitted for Oil Fuel. 3.21 FP above 150°F.

Recd 18/3/21 ARK

The amount of Entry Fee ... \$ 30.00 : When applied for, April 4 1921
Special ... \$ 541.00 :
Donkey Boiler Fee ... \$: When received, 19/4/21
Travelling Expenses (if any) \$ 110.00 : 681.00

J. H. Yates
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York APR 19 1921
Assigned + LMC. 3. 21

MACHINERY DEPT. WRITTEN 21/3/21 (+ dates 11/3/21)



Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.