

Rpt. 4.

REPORT ON MACHINERY.

No. 632

Received at London Office FRI. 10 JUN. 1921

Date of writing Report May 6 1921 When handed in at Local Office May 11 1921 Port of Portland, Oregon
No. in Survey held at Portland, Oregon Date, First Survey July 21 '20 Last Survey April 29 1921
Reg. Book. on the Steel Single Screw Oil Tank Steamer "SWIFTEAGLE" (Number of Visits 42)
Master 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 $27\frac{1}{2}$ " 46 " 78 " Length of Stroke 51" Revs. per minute 72 Dia. of Screw shaft as per rule 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 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 $16\frac{1}{2}$ " Size of Crank webs $30\frac{1}{2} \times 10-1/8$ "
as fitted 15-1/8" as fitted 16" Dia. of thrust shaft under
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.
Independent
No. of Feed pumps 2 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 $3\frac{1}{2}$ " In Holds, &c. Fwd. 2 of 3". In Fwd. Pump Room 2 of 3"
In Main Pump Room 2 of $3\frac{1}{2}$ ".
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 $3\frac{1}{2}$ "
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 3:4:21 3:10:21 3:15:21 Nos of Certificates 225, 226, 231.
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 12.56 sq. 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" 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"
Butt Straps rivets 97.49 Working pressure of shell by rules 228.5 lbs. Size of manhole in shell 12" x 16"
Per centages of strength of longitudinal joint plate 83.928
Size of compensating ring Hd. Flanged in 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 $7\frac{3}{4} \times 7\frac{1}{4}$ Back $7\frac{1}{2} \times 7\frac{1}{2}$ Top $8\frac{3}{4} \times 7\frac{1}{4}$ If stays are fitted with nuts or riveted heads Riveted Hd. Working pressure by rules 215
sq. in.
Material 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" Pitch of stays $17\frac{1}{2} \times 18\frac{1}{2}$ 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"x13" Working pressure of plate by rules 234
Diameter of tubes 2" Pitch of tubes $3\frac{1}{2} \times 3-5/8$ 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" Working pressures by rules 242 Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre $11\frac{1}{2} \times 3/4$ Length as per rule 35" Distance apart 8" Number and pitch of stays in each 4 at $7\frac{1}{4}$ "
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

WS89-0208

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 R. Merrill

Manufacturers.

Dates of Survey while building { During progress of work in shops - - July 21, Aug. 11, 26, Sept. 13, 23, Oct. 16, 20, 27, Dec. 7, 20, Feb. 2, 4, 21, 25, 28, Mar. 1, 2, 4, 8, 9, 10, 12, 15, 19, 21, 23, 25, 28, 30, 31, Apr. 2, 4, 6, 7, 8, 16, 19, 22, 27, 28, 29.
During erection on board vessel - - -
Total No. of visits 42.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders Slides Int. Covers Pistons Rods
Connecting rods Crank shaft Apr. 29 Thrust shaft Apr. 16 Tunnel shafts Apr. 16 Screw shaft Apr. 1 Propeller Apr. 8
Stern tube Mar. 25 Steam pipes tested Apr. 16 Engine and boiler seatings Apr. 8 Engines holding down bolts Apr. 16
Completion of pumping arrangements Mar. 30 Boilers fixed Apr. 10 Engines tried under steam Apr. 27
Completion of fitting sea connections Apr. 2 Stern tube Mar. 21 Screw shaft and propeller Apr. 8
Main boiler safety valves adjusted Apr. 27 Thickness of adjusting washers Check Nuts
Material of Crank shaft Steel Identification Mark on Do. Lloyd's G.D. 4811, 20:8:20 Material of Thrust shaft Steel Identification Mark on Do. Lloyd's 3646 G.D. 4818 C.W.
Material of Tunnel shafts Steel Identification Marks on Do. C.W. Material of Screw shafts Steel Identification Marks on Do. Lloyd's 23:8:20 Spare Do. 4805 C.W.
Material of Steam Pipes O. H. Lapwelded Steel Test pressure 630 lbs. 30:7:20

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. "SWIFTSCOUT"

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 4-21 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. 4.21 FD CL

Fitted for Oil Fuel 4.21. FP above 150°F

Reck

16/6/21

J.R.R.

The amount of Entry Fee ... \$ 30.00 : When applied for,
Special ... \$ 541.00 : May 2 19 21
Donkey Boiler Fee ... £ : When received,
Travelling Expenses (if any) \$ 100.00 : May 10 21

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York MAY 24 1921

Assigned + LMC 4.21

CERTIFICATE WRITTEN 10-6-21



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