

REC'D NEW YORK JUN - 6 1921

Rpt. 4.

REPORT ON MACHINERY.

No. 634

Received at London Office

Date of writing Report May 26 1921 When handed in at Local Office May 27 1921 Port of Portland, Oregon

No. in Survey held at Portland, Oregon Date, First Survey July 21 '20 Last Survey May 20 1921

Reg. Book. on the Single Screw Oil Tank Steel Steamer "SWIFTLIGHT" (Number of Visits 42)

Master Built at Portland, Ore. By whom built Northwest Bridge & Iron Co. Tons ^{Gross} 8206.61 _{Net} 5091.70 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" _{as fitted} 16-3/8" 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

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

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".

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 Yes

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 None

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 Yes worked from Top

The Screw Shaft Liner is fitted in three lengths burned together to full depth of Liner. Yes

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. Date of test 22.3.21 26.3.21 30.3.21 No. of Certificate 232, 233, 237

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 1/2" Length 11'-9" Material of shell plates Steel

Thickness 1-5/8" Range of tensile strength 71680 lbs. Are the shell plates welded or flanged flgd Descrip. of riveting: cir. seams D.R.

long. seams Double Butted 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 in No. and Description of Furnaces in each boiler 3 Morison Material Steel Outside diameter 51-3/8"

Length of plain part 11/16" Thickness of plates 11/16" Description of longitudinal joint 11/16" No. of strengthening rings 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 1/2" 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 215

Material of stays Steel Area at smallest part 1.755 sq. 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 Area supported by each stay 323.75 Working pressure by rules 287 Material of Front plates at bottom Steel

Thickness 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 1/2"

Working pressure by rules 223 Steam dome: description of joint to shell None % of strength of joint None

Diameter None Thickness of shell plates None Material None Description of longitudinal joint None Diam. of rivet holes None

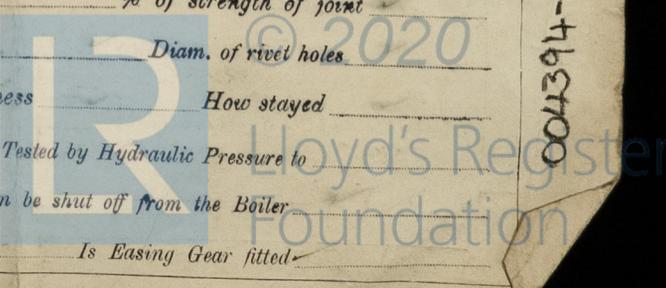
Pitch of rivets None Working pressure of shell by rules None Crown plates None Thickness None How stayed None

SUPERHEATER. Type None Date of Approval of Plan None Tested by Hydraulic Pressure to None

Date of Test None Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler None

Diameter of Safety Valve None Pressure to which each is adjusted None Is Easing Gear fitted None

004394-004404-0184



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 and Nuts, 2 Bottom End Brasses with Bolts and Nuts, 2 Main Bearing Bolts and Nuts, 2 Sets of Coupling Bolts and Nuts, set of Valves for Air, Circulating, Feed and Bilge Pumps, set of Rings for H.P., I.P. and 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
W. Cullers

Manufacturer.

Dates of Survey while building: During progress of work in shops - - July 21, Aug. 11, 26, Sept. 13, 20, 23, Oct. 16, 20, 27, Dec. 7, 20, Feb. 25, 28, Mar. 2, 7, 9, 10, During erection on board vessel - - 12, 15, 17, 18, 22, 23, 26, 28, 30, 31, Apr. 13, 15, 18, 19, 22, 26, 29, May 3, 9, 11, 12, 14, 18, 19, 20. Total No. of visits 42

Is the approved plan of main boiler forwarded herewith

Is the approved plan of donkey boiler forwarded herewith

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods
Connecting rods Crank shaft May 20 Thrust shaft May 9 Int. Tunnel shafts May 9 Screw shaft May 9 Propeller May 9
Stern tube Apr. 1 Steam pipes tested May 3 & 9 Engine and boiler seatings May 3 Engines holding down bolts May 12
Completion of pumping arrangements May 10 Boilers fixed May 6 Engines tried under steam May 18
Completion of fitting sea connections Apr. 15 Stern tube Apr. 18 Screw shaft and propeller May 3
Main boiler safety valves adjusted May 18 Thickness of adjusting washers
Material of Crank shaft Steel Identification Mark on Do. Lloyd's G.D. Material of Thrust shaft Steel Identification Mark on Do. Lloyd's 3645 GD
Material of Tunnel shafts Steel Identification Marks on Do. Lloyd's 4817 CW Material of Screw shafts Steel Identification Marks on Do. Lloyd's 4815 CW
Material of Steam Pipes O. H. Lapwelded Steel Test pressure 630 lbs. Spare Do. 4802, 19.7.20 CW
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. "Swifteagle"

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 5-21 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 5-21 F.D.C.L. Fitted for Oil Fuel 6-21 FP above 150°F

MACHINERY DEPT.
WRITTEN
14/7/21
Hales 30/6/21

Bell
8/7/21

ARR

Certificate (if required) to be sent to

The amount of Entry Fee ... \$ 30.00 : When applied for,
Special ... \$ 541.00 : May 25 1921
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) \$ 100.00 : 1.6.1921

Engineer Surveyor to Lloyd's Register of Shipping.

J. A. Yates

Committee's Minute New York JUN 14 1921

Assigned + LMC-5-21



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