

REPORT ON MACHINERY.

No. 509

MON. 20 AUG. 1917

REC'D NEW YORK

July 17, 1917

Received at London Office

Date of writing Report July 9-10 1917 When handed in at Local Office July 12 1917 Port of Seattle, Wash. U.S.A.

No. in Survey held at Seattle Date, First Survey March 12th Last Survey June 8th 1917
Reg. Book. (Number of Visits 28)

ESTABLISHED on the Steel Screw Steamer "JOSIAH MACY" (Builders yard N^o 4) Tons { Gross 6899.3
Net 5296.6

Master W. Carpenter Built at Seattle By whom built Skinner & Eddy Corporation When built 1917

Engines made at Skeneetady N.Y. By whom made General Electric Company when made 1917

Boilers made at Seattle By whom made Commercial Boiler Works when made 1917

Registered Horse Power 2500 Owners Standard Oil Company of New Jersey Port belonging to Bayonne N.J.

Com. Horse Power as per Section 28 417 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Quintus Double reduction Turbine 5 Stage Ahead 2 of Astern No. of Cylinders One No. of Cranks —

No. of Cylinders — Length of Stroke — Revs. per minute 100 Dia. of Screw shaft as per rule 13.49 Material of Steel
as fitted 13.75 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

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 4'-7"

Dia. of Tunnel shaft as per rule 12.05 Dia. of Crank shaft journals as per rule 12.25 Dia. of Crank pin — Size of Crank webs — Dia. of thrust shaft under

bars 12.75 Dia. of screw 16'-5" Pitch of Screw 12' 3" No. of Blades 4 State whether moveable yes Total surface 76 sq ft

No. of Feed pumps 2 Diameter of ditto 12" Stroke 18" Can one be overhauled while the other is at work yes

No. of Bilge pumps 1 Duplex Diameter of ditto 5 3/4" Stroke 6" Can one be overhauled while the other is at work yes

No. of Donkey Engines 1 Duplex Sizes of Pumps 12"-8 1/2" x 12" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 3-3" 2-3" Boiler Room 1-6" Engine Room Holds, &c. 2-3" Lines under bunkers 2-2 1/2" for Hold

No. of Bilge Injections 1 sizes 10" Connected to condenser yes to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 1-6"

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 None

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Valves - Cocks for boiler blow off

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 Oil pipes How are they protected flooring

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 No tunnel Is it fitted with a watertight door — worked from —

MANUFACTURERS, &c.—(Letter for record August 5 1916) Manufacturers of Steel Lukens Steel Company 35B

Total Heating Surface of Boilers 3 = 8055 Is Forced Draft fitted No No. and Description of Boilers 3 Single ended Scotch marine

Working Pressure 210 lbs Tested by hydraulic pressure to 315 lbs Date of test April 26 No. of Certificate —

Can each boiler be worked separately yes Area of fire grate in each boiler 65 sq ft No. and Description of Safety Valves to

each boiler 2 Ashton Area of each valve 9.6" Pressure to which they are adjusted 210 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers on woodwork 12" Mean dia. of boilers 14'-10 1/2" Length 11'-0" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams double

g. seams triple Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 10" Lap of plates or width of butt straps 22 3/8"

Percentages of strength of longitudinal joint 95 Working pressure of shell by rules 228 Size of manhole in upper backhead 12" x 16"

No. of compensating ring Head flanged No. and Description of Furnaces in each boiler 3. Morrison Material Steel Outside diameter 48 1/2"

Length of plain part top 24" Thickness of plates bottom 24" Description of longitudinal joint — No. of strengthening rings —

Working pressure of furnace by the rules 222 Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 15/16"

Each of stays to ditto: Sides 7" x 8" Back 7 1/4" x 7 3/4" Top 7" x 8" If stays are fitted with nuts or riveted heads 1 1/2" riveted Working pressure by rules 214

Material of stays Morrison Area at smallest part 1 1/2" x 2.025" Area supported by each stay 56.25 sq in Working pressure by rules 225 End plates in steam space:

Material Steel Thickness 1 1/4" Pitch of stays 16 3/8" x 17 1/2" How are stays secured double nuts Working pressure by rules 243 Material of stays Steel

Area at smallest part 8.29 Area supported by each stay 286.56 sq in Working pressure by rules 300 Material of Front plates at bottom Steel

Thickness 1 1/2" Material of Lower back plate Steel Thickness 1 1/2" + 1/2" double Greatest pitch of stays 12" Working pressure of plate by rules 350

Diameter of tubes 3'-5" Pitch of tubes 5'-6 5/8" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 8 1/4" x 12"

Ch across wide water spaces 13" Working pressures by rules 268 Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 11" x 1 1/2" Length as per rule 34" Distance apart 8" Number and pitch of stays in each 4-7" pitch

Working pressure by rules 292 Steam dome: description of joint to shell None % of strength of joint —

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

Working pressure of shell by rules — Crown plates — Thickness — How stayed —

SUPERHEATER. Type Foster Date of Approval of Plan New York November 1916 Tested by Hydraulic Pressure to 630 lbs

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes

Pressure to which each is adjusted 211 lbs Is Easing Gear fitted yes

IS A DONKEY BOILER FITTED? ☒

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—
TURBINE SPARES: 2-Bolts & nuts for each
size pinion and gear bearings.
2 Bolts & nuts for each size star bearings.
1/20 of total number bolts for each gear
case joint
1/20 of total number bolts for each turbine
case joint, also thermometers & packings.
1 Spring for emergency governor.
1 Full bearing for high speed pinion.
1 Full bearing for low speed pinion.
1 Full bearing for high speed gear.
1 Full bearing for low speed gear.
1 Lubricating pump complete.
1 Set rings for adjusting rotor shaft.
The foregoing is a correct description,

1 Set Coupling Bolts
1 Propeller shaft and Hub complete
2 Propeller blades
1 Set valves, seats & springs for each pump
2 Boiler feed check valves
20 Condenser tubes & 50 ferrules
20 plain boiler tubes, main boiler.
10 plain boiler tubes, donkey boiler.
4 Manhole dogs and bolts
2 Safety valve springs
1 Piston rod & Valve for circulation
Pumps also set piston rings
1 Piston rod & piston rings
Cargo Pumps.
200 lbs assorted bolts and nuts
300 " Steel plate
100 " Sheet brass
4 long wrought iron
luggage bolts, bobbles and
grate bars for the boiler

COMMERCIAL BOILER WORKS

W. H. Jenkins

Skinner & Eddy Corporation
by G. M. McCallum

BUILDERS Manufacturer. BOILERS

Dates of Survey while building
During progress of work in shops -- March 12-19-29 April 3-6-10-14-16-19-21 10 visits
During erection on board vessel -- April 10-12-16-19-21-24-27 May 1-5-9-14-21-26 June 1-5-6-7-8 18 visits
Total No. of visits 28 visits
Is the approved plan of main boiler forwarded herewith ☒ yes
" " " donkey " " " " copy only

Dates of Examination of principal parts—Cylinders — Slides — Covers — Pistons — Rods —
Connecting rods — Crank shaft — Thrust shaft March 29 Tunnel shafts March 29 Screw shaft March 29 Propeller April 10-19
Stern tube April 10 Steam pipes tested May 26 Engine and boiler seatings April 14 Engines holding down bolts June 9
Completion of pumping arrangements June 8 Boilers fixed May 9 Engines tried under steam June 7
Completion of fitting sea connections April 19 Stern tube April 6 Screw shaft and propeller April 16-19
Main boiler safety valves adjusted June 6-8 Thickness of adjusting washers Port 525-492. Midale 565-239. Starboard 329-36
Material of Crank shaft — Identification Mark on Do. — Material of Thrust shaft Steel Identification Mark on Do. 11-7-16
Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts Steel Identification Marks on Do. 11-7-16
Material of Steam Pipes Steel ✓ Test pressure 630 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 If so, state name of vessel "S.V. HARKNESS" ✓

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

The main engines, Curtis type of Turbine double reduction geared, single screw, inspected by a Surveyor to the Society during construction in the shop and installed on board together with all connections and auxiliaries under special survey in accordance with the approved plans. The material and workmanship both of good quality.

The boilers built and installed under special survey in accordance with the approved plans; the material and workmanship including mountings and fittings are all of good quality. On completion were tested by hydraulic pressure to 315 lbs and the safety valves adjusted under steam to 210 lbs working pressure. The machinery tried under steam and found satisfactory.

The Machinery eligible, in my opinion, to have the record in the Register Book of + LMC 6.17. Fitted for oil fuel 6.17. F.P. above 150° F. and Electric Light.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC. 6.17. 1 Geared Steam Turbine

Fitted for oil fuel 6.17. F.P. above 150°F.

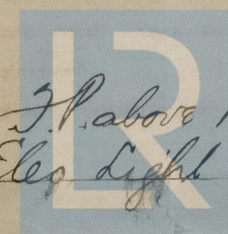
The amount of Entry Fee ... \$ 73.05 : When applied for,
Special ... \$ 204.25 : July 12th 1917
Donkey Boiler Fee ... \$ 25.00 : When received,
and other
Travelling Expenses (if any) \$ 51.00 : ✓ 19

Committee's Minute

New York JUL 3 1 1917

Assigned

+ LMC 6.17 Fitted for oil fuel 6.17 F.P. above 150° F.
Elec Light



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Foundation