

REPORT ON MACHINERY.

No. 3344

Received at London Office

Date of writing Report

19

When handed in at Local Office

6th AUG

1920

Port of SAN FRANCISCO.

No. in Survey held at OAKLAND, CAL.

Date, First Survey 2nd AUG. 1919Last Survey 28th JULY 1920

Reg. Book.

on the

S/S "SAPULPA"

(Number of Vials 34)

Master C. DAMSON.

Built at OAKLAND, CAL.

By whom built MOORE SHIPBUILDING CO

Tons Gross 7311.

Net 4526.

When built 1920

Engines made at LOS ANGELES.

By whom made LEWELLYN IRON WORKS.

when made 1919

Boilers made at OAKLAND, CAL.

By whom made MOORE SHIPBUILDING CO

when made 1919

Registered Horse Power

Owners U.S. SHIPPING BOARD

Port belonging to SAN FRANCISCO

Nom. Horse Power as per Section 28 579.

Is Refrigerating Machinery fitted for cargo purposes NO

Is Electric Light fitted YES

ENGINES, &c.—Description of Engines

TRIPLE EXPANSION.

No. of Cylinders THREE

No. of Cranks THREE.

Dia. of Cylinders 24 1/2" x 41 1/2" x 72"

Length of Stroke 48"

Revs. per minute 85

Dia. of Screw shaft

as per rule 14 1/8"

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

Length of stern bush 66"

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

as per rule 13 1/2"

Dia. of Crank pin 14 3/8"

Size of Crank webs 27 1/2" x 9 1/2"

Dia. of thrust shaft under

collars 14"

Dia. of screw 18'-0"

Pitch of Screw 14'-0"

No. of Blades 4

State whether moceable YES

Total surface 95 sf

No. of Feed pumps TWO

Diameter of ditto 2' x 8"

Stroke 24"

Can one be overhauled while the other is at work YES

No. of Bilge pumps TWO

Diameter of ditto 5"

Stroke 21"

Can one be overhauled while the other is at work YES

No. of Donkey Engines THREE

Sizes of Pumps 12' x 8' x 12 D.P. 2' x 6' x 5 1/2' x 16 D.P.

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room THREE 3 1/2" DIA. ONE 4" DIA.

In Holds, &c. TWO 2 1/2" DIA IN FORE TWEEN DECK CARGO SPACE.

ONE 3" DIA. IN FORE PEAK. ONE 3" DIA. IN AFTER PEAK. ONE 3 1/2" DIA. IN COFFER DAM.

No. of Bilge Injections ONE sizes 12"

Connected to condenser, or to circulating pump C. PUMP Is a separate Donkey Suction fitted in Engine room & size YES

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 YES

Are they Valves or Cocks VALVES

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

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record

Manufacturers of Steel

ILLINOIS STEEL CO

Total Heating Surface of Boilers 8745

Is Forced Draft fitted YES

No. and Description of Boilers 3 CYL MULTITUBULAR S.E.

Working Pressure 210 LBS.

Tested by hydraulic pressure to 315 LBS

Date of test 27th JUNE 1919

No. of Certificate 155 A.W.L

Can each boiler be worked separately YES

Area of fire grate in each boiler OIL BURNER

No. and Description of Safety Valves to

each boiler TWO SPRING LOADED

Area of each valve 12.56 sq"

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

Mean dia. of boilers 15'-5 1/8" Length 11'-0" Material of shell plates STEEL

Thickness 1 1/8"

Range of tensile strength 60900-66000

Are the shell plates welded or flanged NO

Descrip. of riveting: cir. seams D.R.

long. seams D.B.S. T.R.

Diameter of rivet holes in long. seams 19/16"

Pitch of rivets 10"

Lap of plates or width of butt straps 22 1/4"

Per centages of strength of longitudinal joint

rivets 84.4

Working pressure of shell by rules 243 LBS

Size of manhole in shell 12" x 16"

Size of compensating ring FLANGED

No. and Description of Furnaces in each boiler THREE MORISON

Material STEEL

Outside diameter 45'-0625"

Length of plain part

top

Thickness of plates

crown 2 1/2"

Description of longitudinal joint WELDED

No. of strengthening rings

bottom

Thickness of plates

bottom 3/2"

Description of longitudinal joint WELDED

No. of strengthening rings

Working pressure of furnace by the rules 237 LBS

Combustion chamber plates: Material STEEL

Thickness: Sides 11/16"

Back 11/16"

Top 11/16"

Bottom 15/16"

Pitch of stays to ditto: Sides 7 3/4" x 7"

Back 7 3/4" x 7 1/4"

Top 8 3/8" x 7"

If stays are fitted with nuts or riveted heads R.H.

Working pressure by rules 215 LBS

Material of stays STEEL

Area at smallest part 1.692

Area supported by each stay 58.625

Working pressure by rules 231 LBS

End plates in steam space:

Material STEEL

Thickness 1/4"

Pitch of stays 17" x 16"

How are stays secured D. NUTS

Working pressure by rules 257 LBS

Material of stays STEEL

Area at smallest part 8.29

Area supported by each stay 27.20

Working pressure by rules 317 LBS

Material of Front plates at bottom STEEL

Thickness 13/16"

Material of Lower back plate STEEL

Thickness 13/16"

Greatest pitch of stays 14"

Working pressure of plate by rules 305 LBS

Diameter of tubes 2 1/2"

Pitch of tubes 3 3/4"

Material of tube plates STEEL

Thickness: Front 13/16"

Back 13/16"

Mean pitch of stays 7.5"

Pitch across wide water spaces 13"

Working pressures by rules 314 LBS

Girders to Chamber tops: Material STEEL

Depth and

thickness of girder at centre 11' x 3 1/4" DOUBLE

Length as per rule 34"

Distance apart 8 3/8"

Working pressure by rules 279 LBS

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

UPERHEATER. Type FOSTER

Date of Approval of Plan

Tested by Hydraulic Pressure to 630 LBS

Date of Test 23-6-19

F.H.O.

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

Diameter of Safety Valve 1 1/2"

Pressure to which each is adjusted 215 LBS

Is Easing Gear fitted ADJUSTING SCREW

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts and nuts. 2 bottom end bolts and nuts. 2 main bearing bolts. 1 set of coupling bolts. 1 set of feed and bilge pump valves. 1 set of piston rings for each piston. 1 set of crosshead brasses. 1 set of crank pin brasses. 1 valve stem. 18 piston junk ring bolts. 18 cylinder cover studs. 12 valve chest cover studs. 6 air pump valve studs and nuts. 35 condenser tubes. 1 spare propeller blade. 20 boiler tubes. 2 safety valve springs. 1/2 set of valves, studs and springs for aux. pumps. A quantity of assorted bolts, nuts and iron.

The foregoing is a correct description,

Moore Shipbuilding Co
Baltimore

Manufacturer.

Dates of Survey while building
During progress of work in shops 1919: AUG. 2, 19, 22, SEPT. 15, 17, 20, 30, 1920: JUNE 14.
During erection on board vessel 1920: JAN. 14, FEB. 16, MAR. 1, 12, 30, APR. 27, JUNE 1, 4, 10, 11, 14, 17, 22, 24, 25, 29, JULY 2, 7, 9, 13, 15, 19, 21, 23, 24, 28.
Total No. of visits 34.

Is the approved plan of main boiler forwarded herewith YES.

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 11-6-20 Slides 17-6-20 Covers 17-6-20 Pistons 22-6-20 Rods 22-6-20

Connecting rods 22-6-20 Crank shaft 30-3-20 Thrust shaft 30-3-20 Tunnel shafts ✓ Screw shaft 17-9-19 Propeller

Stern tube 20-9-19 Steam pipes tested 14th JUNE/5th JULY/1920 Engine and boiler seatings 18-9-19 Engines holding down bolts 24-6-20

Completion of pumping arrangements 24-7-20 Boilers fixed 14-1-20 Engines tried under steam 24-7-20

Completion of fitting sea connections 19-7-20 Stern tube 19-7-20 Screw shaft and propeller 19-7-20

Main boiler safety valves adjusted 23-7-20 Thickness of adjusting washers LOCK NUTS FITTED.

Material of Crank shaft STEEL. Identification Mark on Do. 7-22-19 F.B.N. 58. Material of Thrust shaft STEEL. Identification Mark on Do. R.S. 30-4-19.

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts STEEL. Identification Marks on Do. N.C. 12-10-18.

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. No.

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. "SALINA" SAN FRANCISCO REP. N° 3326.

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

The machinery of this vessel was built under special survey of the American Bureau of Shipping and a copy of their certificate N° 36-X on same is attached hereto. ENGINE N° 1078.

During installation the machinery was examined by the undersigned and found to be in accordance with the plans and workmanship was found good.

In my opinion the machinery of this vessel is eligible to be classed in the Register Book with the Record of L.M.C. 7-20, fitted for Oil fuel 7-20, F.P. above 150°F. Electric light

It is submitted that
this vessel is eligible for
THE RECORD. LMC 7-20 FI
Fitted for oil fuel 7-20 F.P. above 150

Roll
30/9/20

The amount of Entry Fee ... \$ 15.00 : When applied for,
Special ... \$ 24.75 : Aug. 7, 1920
Donkey Boiler Fee ... £ :
S. & Travelling Expenses (if any) \$ 4.50 : 7-9-20

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Lmb. 7.20

MACHINERY CERT.
WRITTEN
31/8/20



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Foundation