

REPORT ON MACHINERY.

No. 19964.
THU. 1 MAR. 1921

Date of writing Report 19 When handed in at Local Office 17/2/21 Port of New York
No. in Survey held at Staten Island Date, First Survey April 28, '20 Last Survey Feb 10, 1921
Reg. Book. 81692 on the S.S. "SAN TEODORO" (Number of Visits)
Master W. F. F. Y. N. Built at New York By whom built Standard S.B. Corp. Tons } Gross
Engines made at Chester Pa By whom made Sun S.B. Co. When built 1921
Boilers made at New York By whom made Standard S.B. Corp. when made 1921
Registered Horse Power Owners Eagle Oil Transport Co. Port belonging to London
Nom. Horse Power as per Section 28 544 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ES, & Co. — Description of Engines Triple Exp No. of Cylinders 3 No. of Cranks 3
Cylinders 27"-45"-74 Length of Stroke 48 Revs. per minute 80 Dia. of Screw shaft as per rule 14.83" Material of Steel
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
Propeller boss Yes If the liner is in more than one length are the joints burned — If the liner does not fit tightly at the part
the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If two
are fitted, is the shaft lapped or protected between the liners — Length of stern bush 64"
Tunnel shaft as per rule 13.4" Dia. of Crank shaft journals as per rule 14.05" Dia. of Crank pin 14.5" Size of Crank webs 27 1/2" x 9 1/2" Dia. of thrust shaft under
14 1/4" Dia. of screw 17'-9" Pitch of Screw 17'-0" No. of Blades 4 State whether moveable No Total surface 101 sq ft
Feed pumps 2 Weirs Diameter of ditto 8 1/2" x 10 1/2" Stroke 21" Can one be overhauled while the other is at work Yes
Bilge pumps 2 Diameter of ditto 4 Stroke 26" Can one be overhauled while the other is at work Yes
Donkey Engines GEN SERVICE Sizes of Pumps 8" x 6" x 8" DUPLEX No. and size of Suctions connected to both Bilge and Donkey pumps
In Room 7 @ 3 1/2" In Holds, &c. Fore Hold 2 @ 2 1/2" Pump Room
4" and 2 @ 2 1/2" For. Cofferdam 1 @ 4", Aft Cofferdam 1 @ 3 1/2"
Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 4 1/2"
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
connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
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 Just below
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
pipes are carried through the bunkers Oil Fuel Pipes only How are they protected —
Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —

ERS, & Co. — (Letter for record S) Manufacturers of Steel LUKENS
Heating Surface of Boilers 8160 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 Scotch
Working Pressure 180 lbs. Tested by hydraulic pressure to 270 Date of test 11 DEC. '20 No. of Certificate 438
Each boiler be worked separately Yes Area of fire grate in each boiler 67 sq ft No. and Description of Safety Valves to
Boiler 2 Spring loaded Area of each valve 9.6 sq ft Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
Net distance between boilers or uptakes and bunkers or woodwork 2 feet Mean dia. of boilers 15'-6" Length 11'-7" Material of shell plates Steel
Range of tensile strength 60000 MIN. Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R
seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 21"
Stages of strength of longitudinal joint rivets 98 Working pressure of shell by rules 194 Size of manhole in shell 18" x 22"
Compensating ring 38" x 34" x 1 3/8" No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 49 5/32"
Thickness of plates crown 37" bottom 34" Description of longitudinal joint weld No. of strengthening rings 1
Working pressure of furnace by the rules 186 Combustion chamber plates: Material Steel Thickness: Sides 19" Back 19" Top 19" Bottom 7"
of stays to ditto: Sides 7 1/2" x 7 1/4" Back 7 1/2" x 7 1/4" Top 8" x 7 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 223
Material of stays Steel Area at smallest part 1.48 sq ft Area supported by each stay 54.4 sq ft Working pressure by rules 197 End plates in steam space:
Material Steel Thickness 1 3/32" Pitch of stays 17" x 17" How are stays secured D. NUTS Working pressure by rules 186 Material of stays Steel
at smallest part 5.94 sq ft Area supported by each stay 289 Working pressure by rules 186 Material of Front plates at bottom Steel
Material of Lower back plate Steel Thickness 3/4" x 5/8" Greatest pitch of stays 7 1/2" x 7 1/4" Working pressure of plate by rules 223
Pitch of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 1/2" Material of tube plates Steel Thickness: Front 3/4" x 5/8" Back 3/4" Mean pitch of stays 9.125"
across wide water spaces 13 3/4" Working pressures by rules 180 Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 10" x 1 3/8" Length as per rule 2'-7 1/4" Distance apart 8" Number and pitch of stays in each 3 @ 7 1/2"
Working pressure by rules 237 Steam dome: description of joint to shell — % of strength of joint

Superheater. Type — Date of Approval of Plan — Tested by Hydraulic Pressure to —
Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler —
Pressure to which each is adjusted — Is Easing Gear fitted —

3559-0062

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 4 Top end Bolts & nuts, 2 Bottom End Bolts and Nuts, 2 Main bearing bolts and nuts, Set of Coupling Bolts, Set Feed and Bilge Pump valves, 1 set rings for each main engine piston, Assorted bolts & nuts, Iron of various sizes.

1 Tail shaft & propeller, 1 Ecc. strap complete, 1 Link block complete, 1 Crank pin box complete, 2 Crosshead pin boxes, 1 guide shoe, 1 air pump rod and nut, Piston rod and spare impeller & shaft for circulating pump unit, 1 set feed check valves, 12 junk rings, 2 doz. boiler tubes, 20 condenser tubes & ferrules, 2 M.B. safety valve springs, Set of metallic packing

The foregoing is a correct description, for boilers and installation of machinery

STANDARD SHIPBUILDING CORPORATION

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1920-April 28 May 12-18 25 July 2-29 Oct. 1 Nov. 1-3 8 12-15 17-19 24-29 Dec. 4-8 10-11 15 17 18 22 24 29-1921-Jan 4 7 11
During erection on board vessel -- 19-21 25-26 29-30 Feb. 3-7 10
Total No. of visits 39.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders Covers Pistons Rods

Connecting rods Crank shaft Thrust shaft Tunnel shafts 8 Nov. '20 Screw shaft 8 Nov. 1920 Propeller 1 Nov. '20

Stern tube 29 Nov. 1920 Steam pipes tested 29 Nov. '20 Engine and boiler seatings 17 Dec '20 Engines holding down bolts 7 Jan. 1921

Completion of pumping arrangements 3 Feb 1921 Boilers fixed 24 Dec. 1920 Engines tried under steam 25 Jan. 1921

Completion of fitting sea connections 17 Dec 1920 Stern tube 8 Dec. 1920 Screw shaft and propeller 8 Dec. 1920

Main boiler safety valves adjusted 30 Jan 1921 Thickness of adjusting washers AFT: 11/16 3/8 7/16 7/16

Material of Crank shaft Steel Identification Mark on Do. 1697 R.S. 2990 W.C. Material of Thrust shaft Steel Identification Mark on Do. 538-45

Material of Tunnel shaft Steel Identification Marks on Do. 549-116 W.C. Material of Screw shafts Steel Identification Marks on Do. 549-114 W.C. 549-108 W.C.

Material of Steam Pipes Seamless steel Test pressure 540 lb

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 No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The Engines were built at

Chester, Pa. (See Phila. Rpt. 4066 attached). The boilers have been constructed

of tested material under special survey in accordance with the

approved plan. The machinery has been installed in a workmanlike

manner by the builders and the materials are good.

In my opinion the vessel is eligible for the

Record + LMC 2.21. and the notation "Fitted for oil fuel 2.21

F.P. above 150°F.

It is submitted that this vessel is eligible for the Record + LMC 2.21. FD CL

FITTED FOR OIL FUEL 2.21 FP ABOVE 150°F.

RECEIVED

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