

REPORT ON OIL ENGINE MACHINERY.

No. 7969

FEB 17 1941

Date of writing Report 10 Dec 40 When handed in at Local Office 18 Dec 40 Port of Philadelphia
 No. in Survey held at Leheto. Pa Date, First Survey 15 Apr Last Survey 10 Nov 1940
 Reg. Book. Number of Visits 30

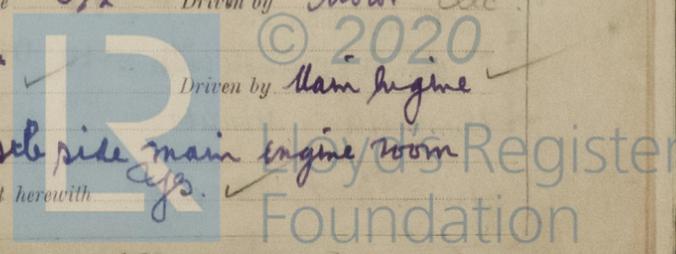
on the Single Screw vessel AMERICA. SUN. Tons { Gross 10248 Net 6891
 Built at Leheto. Pa By whom built Sim SB & DD Co Yard No. 196 When built 1940
 Engines made at " By whom made " Engine No. " When made "
 Donkey Boilers made at Cartaret. NJ By whom made Foster Wheel Co Boiler No. " When made "
 Horse Power 7500 Owners Sim. Oil Co Port belonging to Philadelphia
 Horse Power as per Rule 1190 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 for which vessel is intended Carrying Petroleum in bulk.

ENGINES, &c.—Type of Engines Sim Doxford Opposed Piston 2 or 4 stroke cycle 2 Single or double acting Single
 Pressure in cylinders 600 lbs Diameter of cylinders 32" Length of stroke 55 7/16" No. of cylinders 5 No. of cranks 6
 Indicated Pressure 96.5 Flywheel dia. None Weight " Means of ignition Compression Kind of fuel used Bunker "C"
 Bearings, adjacent to the Crank, measured from inner edge to inner edge 109" 57 3/4" Yes Is there a bearing between each crank
 Revolutions per minute 94 Crank pin dia. 2 1/2" Crank Webs Mid. length breadth 48" 46 3/4" Thickness parallel to axis 10 1/16" 13 1/2"
 dia. of journals as per Rule 23" as fitted 24" Crank pin dia. 2 1/2" Mid. length thickness 13 1/2" 9 3/4" Thickness around eye-hole 10 1/16"
 Propeller Shaft, diameter as per Rule " as fitted " Intermediate Shafts, diameter as per Rule 19.008" as fitted 23" Thrust Shaft, diameter at collars as per Rule 20" as fitted 23"
 Shaft, diameter as per Rule " as fitted " Screw Shaft, diameter as per Rule 20.708" as fitted 21 5/8" Is the shaft shaft fitted with a continuous liner Yes

Liners, thickness in way of bushes as per Rule 738 as fitted 1 1/16" Thickness between bushes as per Rule " as fitted " Is the after end of the liner made watertight in the stern boss Yes
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner 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 liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube No
 If so, state type " Length of Bearing in Stern Bush next to and supporting propeller 5' 4 1/16" + 4' 2 1/2"
 Diameter, dia. 21-8" Pitch 17'-0" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 143.3 sq. feet
 Method of reversing Engines Sliding camshafts Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Yes
 Thickness of cylinder liners 1 1/8" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with lagging Yes
 If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine 2 SALT WATER FOR COOLERS
 Cooling Water Pumps, No. 2 FRESH. " " MAIN. ENG Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Pumps worked from the Main Engines, No. None Diameter ENGINE ROOM Stroke " Can one be overhauled while the other is at work Yes
 Pumps connected to the Main Bilge Line { No. and Size 1-12" X 8 1/2" X 12" 1. Centrifugal 200 GPM Motor 1-10" X 7" X 10" MAIN Pump room. 2-10" X 7" X 10" Ford. Pump room. How driven Steam Steam Steam
 Cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements "
 Fast Pumps, No. and size 1-12" X 8 1/2" X 12" 1-10" X 7" X 10" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2-7 1/2" X 9" X 12"
 Two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 8-3 1/2" 1-2" 6-3 1/2" in E.R. as per plan In Pump Room "
 Holds, &c. 4-2 1/2" - 2-2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-14" and 1-4" according to plan
 All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces Yes
 From easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
 All Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Valves
 They fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes Are the Overboard Discharges above or below the deep water line Below
 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 Welded steel
 All pipes pass through the bunkers 1-4" bilge suction from cofferdam How are they protected By pipe tunnel
 All pipes pass through the deep tanks Fwd. bilge & ballast suction Have they been tested as per Rule Yes
 All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

The arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another Yes Is the Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from "
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes
 Main Air Compressors, No. 3 No. of stages 2 Diameters 5 1/2" X 3" Stroke 5 1/2" - 5" Driven by Motor Elec
 Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 5" X 2" Stroke 5" Driven by Motor Elec
 Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 5" X 3" Stroke 3 1/2" Driven by Motor Elec
 What provision is made for first Charging the Air Receivers By starting emergency generator.
 Scavenging Air Pumps, No. 1 Diameter 86" Stroke 58" Driven by Main engine
 Auxiliary Engines crank shafts, diameter as per Rule Steam turbines as fitted " Position Flat side main engine room
 Have the Auxiliary Engines been constructed under special survey No Is a report sent herewith Yes



AIR RECEIVERS:—Have they been made under survey *Yes* State No. of Report or Certificate *4111-4089 WHR.*

Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes*
 Can the internal surfaces of the receivers be examined and cleaned *Yes*

Aux Air Receivers, No. *1* Cubic capacity of each *12 cu ft* Is a drain fitted at the lowest part of each receiver *Yes*
 Seamless, lap welded or riveted longitudinal joint *Seamless* Material *Steel* Internal diameter *15"* thickness *1/2"*

Starting Air Receivers, No. *3* Total cubic capacity *486 cu ft* Range of tensile strength *55,000 to 65,000* Working pressure by Rules *805*
 Seamless, lap welded or riveted longitudinal joint *Butt welded* Material *Steel* Internal diameter *42"* thickness *1 3/16"*
 Range of tensile strength *55 to 65,000* Working pressure by Rules *650*
 Actual *600*

IS A DONKEY BOILER FITTED? *Yes* *3 boilers* If so, is a report now forwarded? *Yes*
 Is the donkey boiler intended to be used for domestic purposes only *Yes*

PLANS. Are approved plans forwarded herewith for Shafting *Yes* Receivers *Nov 3, 1939, Oct 25, 1939* Separate Fuel Tanks
 (If not, state date of approval)
 Donkey Boilers General Pumping Arrangements Pumping Arrangements in Machinery Space
 Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*
 State the principal additional spare gear supplied

1 Upper & lower piston rods, 1 main piston, 2 piston skirts, 1 engine brake valve complete, 5 hoses for piston water service, 1 complete feed lubricator, 5 fuel oil pump nuts & guides, 1 bundle of tubes for lubricating oil cooler.

The foregoing is a correct description.
LMC
SUN SHIPBUILDING & DRY DOCK CO. Manufacturer.

Dates of Survey while building	During progress of work in shops--	April 15, 17, May 23, June 10, 14, 29, July 3, 22, 29, 31, Aug 1, Sept 5, 13, 24, Oct 3, 30, 1940	16
	During erection on board vessel--	Aug 1, 6, 21, Sept 9, Oct 10, 11, 14, 16, 17, 18, 25, Nov 4, 7, 10, 1940	14
	Total No. of visits	<i>30</i>	

Dates of Examination of principal parts—Cylinders		<i>24 Sept 40</i>	Covers	<i>24 Sept 40</i>	Pistons	<i>Oct 3, 40</i>	Rods	<i>Sept 9, 40</i>	Connecting rods	<i>Oct 3, 40</i>
Crank shaft	<i>31 July 40</i>	Flywheel shaft	<i>29 July 40</i>	Thrust shaft	<i>29 July 40</i>	Intermediate shafts	<i>29 July 40</i>	Tube shaft	<i>✓</i>	
Screw shaft	<i>22 July 40</i>	Propeller	<i>22 July 40</i>	Stern tube	<i>22 July 40</i>	Engine sealings	<i>21 Aug 40</i>	Engines holding down bolts	<i>18 Oct 40</i>	
Completion of fitting sea connections		<i>29 July 40</i>	Completion of pumping arrangements		<i>7 Nov 1940</i>	Engines tried under working conditions		<i>7 Nov 1940</i>		
Crank shaft, Material	<i>OH Steel</i>	Identification Mark	<i>See forging report</i>		Flywheel shaft, Material	<i>OH Steel</i>	Identification Mark	<i>✓</i>		
Thrust shaft, Material	<i>OH Steel</i>	Identification Mark	<i>4078 WHR</i>		Intermediate shafts, Material	<i>OH Steel</i>	Identification Mark	<i>5620 HBC</i>		
Tube shaft, Material	<i>✓</i>	Identification Mark			Screw shaft, Material	<i>OH Steel</i>	Identification Mark	<i>Reg 6128 ON</i>		
Identification Marks on Air Receivers		<i>3 Starting air receivers</i>	<i>LLOYDS, 4111, WHR, 24.7.40.</i>							
		<i>1 aux</i>	<i>" " " 4089 WHR 14.6.40.</i>							

Is the flash point of the oil to be used over 150° F. *Yes*
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yes*
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *✓* If so, have the requirements of the Rules been complied with *✓*
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *✓*
 Is this machinery duplicate of a previous case *No* If so, state name of vessel *✓*

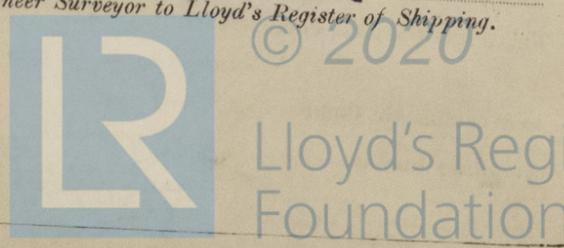
General Remarks (State quality of workmanship, opinions as to class, &c.) *This installation has been constructed under Special Survey and in accordance with the approved plans, the workmanship and materials are good, the installation has been tried out under full power & found satisfactory. In my opinion this installation is eligible to receive the record of +LMC 11.40.*

After the trial trip, the welded bedplate & intablitures were carefully examined & no signs of fractures or weakness was discovered. Approved plans to be forwarded with sister ship.

The amount of Entry Fee *\$10.00* : When applied for, *4 Jan. 1941*
 Special ... *\$699.00* :
 Donkey Boiler Fee *£* :
 Travelling Expenses (if any) *\$40.00* :
 Fee for bedplates *65 \$.* Fee for 4 air tanks *120.00 \$*
4.00 \$.

M. P. Punham
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **NEW YORK JAN 8 - 1941**
 Assigned *+LMC-11,40, oil Eng.*



Certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Is a Report also sent on the Hull of the Ship?

LLOYD'S REGISTER OF SHIPPING (MADE IN ENGLAND)