

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

20 JUL 1942

Date of writing Report 10th June 1942 When handed in at Local Office 10th June 1942 Port of RICHMOND, CALIFORNIA
 No. in Survey held at RICHMOND, CALIFORNIA Date, First Survey 20th February, '42 Last Survey 14th April 1942
 Reg. Book. --- on the S. S. VOLUNTEER Ocean Volunteer (Number of Visits 48)
 Built at RICHMOND, CALIF. By whom built TODD-CALIFORNIA SHIPBUILDING DIVISION of Yard No. 16 When built 1942
 The Permanente Metals Corporation
 Engines made at HAMILTON, OHIO By whom made GENERAL MACHINERY CORP. Engine No. 6558 When made 1942
 Boilers made at SEATTLE, WASHINGTON By whom made PUGET SOUND MACHINERY DEPOT Boiler No. 4, 5, & 6 When made 1942
 Registered Horse Power --- Owners BRITISH GOVERNMENT Port belonging to LONDON
 Nom. Horse Power as per Rule 505 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES
 Trade for which Vessel is intended FOREIGN---CARRYING DRY & PERISHABLE CARGOES

ENGINES, &c.—Description of Engines TRIPLE EXPANSION Revs. per minute 76
 Dia of Cylinders 24 1/2" x 37" x 70" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.97" Crank pin dia. 14.25" Crank webs Mid. length breadth --- Thickness parallel to axis 9"
 as fitted 14.25" Mid. length thickness 9" shrunk Thickness around eye-hole shaft
 Intermediate Shafts, diameter as per Rule 13.32" Thrust shaft, diameter at collars as per Rule 13.97"
 as fitted 13.5" as fitted 14.25"
 Tube Shafts, diameter as per Rule --- Screw Shaft, diameter as per Rule 14.86" Is the tube shaft fitted with a continuous liner ---
 as fitted NONE as fitted 15.25" as fitted 15.25" Is the screw shaft fitted with a continuous liner YES
 Bronze Liners, thickness in way of bushes as per Rule 0.75" Thickness between bushes as per Rule 0.5625" Is the after end of the liner made watertight in the
 as fitted 0.8125" as fitted 0.6875" propeller boss YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner CONTINUOUS
 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 TIGHT FIT
 If two liners are fitted, is the shaft lapped or protected between the liners --- Is an approved Oil Gland or other appliance fitted at the after end of the tube
 shaft NO If so, state type --- Length of Bearing in Stern Bush next to and supporting propeller 5' 1"
 Propeller, dia. 18' 6" Pitch 16' 6" No. of Blades 4 Material BRONZE whether Moveable NO Total Developed Surface 117 sq. ft.
 Feed Pumps worked from the Main Engines, No. NONE Diameter --- Stroke --- Can one be overhauled while the other is at work ---
 Bilge Pumps worked from the Main Engines, No. TWO Diameter 4 1/2" Stroke 26" Can one be overhauled while the other is at work YES
 Feed Pumps (No. and size TWO SIMPLEX 12" x 8" x 24" Pumps connected to the Main Bilge Line (No. and size 1 Indpt. 10" x 11" x 12", 2 attached
 How driven STEAM How driven STEAM---MAIN ENGINE Ballast pump
 Ballast Pumps, No. and size One 10" x 11" x 12" Lubricating Oil Pumps, including Spare Pump, No. and size NONE
 Are two independent means arranged for circulating water through the Oil Cooler NONE Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room 5 @ 3", 1 PORTABLE HOSE CONNECTION, 2 1/2"
 In Pump Room --- In Holds, &c. 2 @ 3" in each hold, 1 @ 5" in each deep tank (Size of Main Bilge Line)

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 10" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1 @ 5" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes NO; STRAINERS IN BILGE WELLS
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES
 Are all Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves COCKS YES
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES Are the Overboard Discharges above or below the deep water line YES
 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 AS APPROVED
 What Pipes pass through the bunkers BILGE PIPES TO FORWARD HOLDS How are they protected THROUGH TANK TOP BRACKETS & STEEL COVERS
 What pipes pass through the deep tanks NONE Have they been tested as per Rule ---
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES
 Is 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 YES Is it fitted with a watertight door NO worked from ENTRANCE FROM DECK

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7140 sq. ft.
 Which Boilers are fitted with Forced Draft 3 MAIN BOILERS Which Boilers are fitted with Superheaters 3 MAIN BOILERS
 No. and Description of Boilers 3 MULTITUBULAR SCOTCH MARINE Working Pressure 220 lbs. per sq. inch
IS A REPORT ON MAIN BOILERS NOW FORWARDED? YES
IS A DONKEY BOILER FITTED? NO If so, is a report now forwarded? ---
 Can the donkey boiler be used for domestic purposes only ---

PLANS. Are approved plans forwarded herewith for Shafting 8/4/41 Main Boilers 28/4/41 Auxiliary Boilers --- Donkey Boilers ---
 (If not state date of approval) 22/8/41
 Superheaters 5/11/41 General Pumping Arrangements 5 & 22/9/41 & 1/10/41 Oil fuel Burning Piping Arrangements COAL FIRED

SPARE GEAR.

Has the spare gear required by the Rules been supplied YES
 State the principal additional spare gear supplied 1 MAIN BEARING--- 2 HALVES

The foregoing is a correct description

[Signature]

Manufacturer.

GENERAL SUPERINTENDENT & ASSISTANT SECRETARY



MARCH 17th, 1941, CONTINUOUS ATTENDANCE UNTIL SHIPMENT

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits 48

FEBRUARY 20th, 1942, CONTINUOUS ATTENDANCE DURING INSTALLATION ON VESSEL

LAST VISIT APRIL 14th, 1942

Dates of Examination of principal parts—Cylinders January 5th, 1942 Slides January 5th, 1942 Covers January 5th, 1942
Pistons January 5th, 1942 Piston Rods January 5th, 1942 Connecting rods January 5th, 1942
Crank shaft January 5th, 1942 Thrust shaft October 29th, 1941 Intermediate shafts July 10th, 14th, 1941; Mar. 25, 1942
Tube shaft NONE Screw shaft August 4th, 1941 Propeller November 18th, 1941 & March 9th, 1942
Stern tube March 9th, 1942 Engine and boiler seatings February 26th, 1942 Engines holding down bolts March 27, 28, 29, 1942
Completion of fitting sea connections March 9th, 1942
Completion of pumping arrangements April 8th, 1942 Boilers fixed March 7th, 1942 Engines tried under steam April 3rd, 1942
Main boiler safety valves adjusted April 3rd, 1942 Thickness of adjusting washers NO WASHERS---LOCK NUTS
Crank shaft material O. H. STEEL Identification Mark LLOYD'S 3717 Aug. 29/41 C.D. Thrust shaft material O. H. STEEL Identification Mark LLOYD'S A.J. Oct. 29, 1941
Intermediate shafts, material O. H. STEEL Identification Mark LLOYD'S 2024-2029 July 10-14/41 & Tube shaft, material --- Identification Mark ---
Screw shaft, material O.H. STEEL Identification Mark LLOYD'S 2090 W.S. Aug. 4, '41 Steam Pipes, material STEEL Test pressure 660 lbs. Date of Test Mar. 31, 1942
Is an installation fitted for burning oil fuel NO Is the flash point of the oil to be used over 150°F. ---
Have the requirements of the Rules for the use of oil as fuel been complied with ---
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo NO 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 YES If so, state name of vessel "OCEAN VANGUARD", "OCEAN VIGIL", "OCEAN VOYAGER", etc., Richmond Rpts. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14 & 15
General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been built under Special Survey, as stated in New York Report No. 41982 and Seattle Boiler Reports Nos. 3444, 3445, 3446, attached hereto. The machinery has been fitted on board the vessel in accordance with the Rules and Approved Plans, and has been tried under full working conditions with good results. In our opinion, the machinery of this vessel is in good and safe working condition and is eligible to be blassed with records of L. M. C. 4/42 and Tail Shaft seen C. L. with notations 3 S. B. (Spt) H.S. 7140 G.S. 172, 220 lbs., F.D. 9 cf.

Certificate to be sent to No instruction received

The amount of Entry Fee \$30.00 Inclusive : When applied for,
Special \$260.68 fee per : 19
Donkey Boiler Fee ... £ vessel to :
Travelling Expenses (if any) £ be charged : When received,
at London : 19

For Self and J. F. Robertson

John F. Robertson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK JUL 1 1942

Assigned + LMC - 4, 42

NOTE - CL
3 S.B (Spt) 220 lbs.

