

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 10 APR 1942

Date of writing Report Jan. 22, 1942 When handed in at Local Office Jan. 22, 1942 Port of RICHMOND, CALIFORNIA

No. in Survey held at RICHMOND, CALIFORNIA Date, First Survey 29th August Last Survey 10th January 1942
Reg. Book.

on the S. S. "OCEAN VESTAL" (Number of Visits 86) Tons {Gross 7174
Net 4272

Built at RICHMOND By whom built TODD-CALIFORNIA SHIPBUILDING DIVISION of The Ward No. 8 Permanent Metal Corporation When built 1942

Engines made at Hamilton, Ohio By whom made General Machinery Corporation Engine No. 6525 When made 1941

Boilers made at Los Angeles, Calif. By whom made Western Pipe & Steel Co. Boiler No. 13-16-18 When made 1941

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 $24\frac{1}{2}$ "x37"x70" 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" Mid. length breadth 29.625" Thickness parallel to axis 9"

as fitted 14.25" Crank webs Mid. length thickness 9" shrank Thickness around eye-hole 7.625"

Intermediate Shafts, diameter as per Rule 13.32" Thrust shaft, diameter at collars as per Rule 13.94"

as fitted 13.5" as fitted 14.25"

Tube Shafts, diameter as per Rule -- Screw Shaft, diameter as per Rule 14.86"

as fitted None as fitted 15.25" Is the {tube} shaft fitted with a continuous liner {Yes

Bronze Liners, thickness in way of bushes as per Rule 0.75" as per Rule 0.5625"

as fitted 0.8125" as fitted 0.6875" Is the after end of the liner made watertight in the 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 $4\frac{1}{2}$ " Stroke 26" Can one be overhauled while the other is at work Yes

Feed (No. and size Two Simplex 12"x8"x24" Pumps connected to the { No. and size 1 Indpt. 10"x11"x12" (2 attached)

Pumps (How driven Steam Main Bilge Line { How driven Steam (main engine) Ballast Pump

Ballast Pumps, No. and size One 10"x11"x12" 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, $2\frac{1}{2}$ "

In Pump Room -- In Holds, &c. 2 @ 3" in each hold, 1 @ 5" in each dup. 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 or 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 ~~XXXX~~ Yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges ~~XXXX~~ 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 22/8/41 Main Boiler 28/4/41 Auxiliary Boilers -- Donkey Boilers --

(If not state date of approval)

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

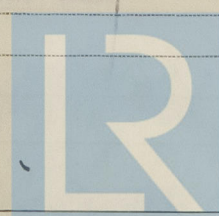
The foregoing is a correct description

CP Beard

Manufacturer.

TODD-CALIFORNIA SHIPBUILDING DIVISION of THE PERMANENTE METALS CORPORATION

003006-003012-0020



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Lloyd's Register
Foundation

Dates of Survey while building
During progress of work in shops - - - March 17th, 1941 continuous attendance until shipment 25th Sept. 1941
During erection on board vessel - - - 29th August 1941 and continuous attendance during installation until 10th January 1942
Total No. of visits 86

Dates of Examination of principal parts - Cylinders 24th Sept. 1941 Slides 24th Sept. 1941 Covers 24th Sept. 1941
Pistons 24th Sept. 1941 Piston Rods 24th Sept. 1941 Connecting rods 24th Sept. 1941
Crank shaft 24th Sept. 1941 Thrust shaft 22nd Aug. 1941 Intermediate shafts 17th June & 5th Nov. 1941
Tube shaft None Screw shaft 23rd July 1941 Propeller 10th November 1941
Stern tube 10th November 1941 Engine and boiler seatings 31st October 1941 Engines holding down bolts 13th December 1941
Completion of fitting sea connections 12th November 1941
Completion of pumping arrangements 2nd Jan. 1942 Boilers fixed 26th October 1941 Engines tried under steam 23rd & 24th Dec. 1941
Main boiler safety valves adjusted 24th Dec. 1941 Thickness of adjusting washers No washers - Lock nuts
Crank shaft material O. H. Steel Identification Mark Sept. 24, 1941 Thrust shaft material O. H. Steel Identification Mark Aug. 22, 1941
Intermediate shafts, material O.H. Steel Identification Mark 17th June 1941 & Nov. 5, 1941 Tube shaft, material -- Identification Mark --
Screw shaft, material O. H. Steel Identification Mark 1924 July Steam Pipes, material Steel Test pressure 660 lbs. Date of Test 20 to 23 Dec 1941
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 S.S. "OCEAN VANGUARD", "OCEAN VIGIL", "OCEAN VOICE" etc.
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. 41561 and Los Angeles BLR. Rpts. No's 13, 16, 18 attached hereto.
The machinery has been fitted on board the vessel in accordance with the Rules & 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 classed with records of L.M.C. 1-42 and tail shaft seen C L with notations 3 S B (Spt) H. S. 7140 G.S. 129, 220 lbs. F. D. g.c.f.

Certificate to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.)
The amount of Entry Fee ... £ Inclusive : When applied for,
Special 33-6-8 £ fee per : 28/3/1942
(initials)
Donkey Boiler Fee ... £ vessel to be charged at :
Travelling Expenses (if any) £ London :
Committee's Minute NEW YORK FEB 11 1942
Assigned L.M.C. 1/42

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

NOTE - CL
3 SB (Spt)
220 lbs.