

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 5-FEB-1943

Date of writing Report 18 November 1942 When handed in at Local Office 19 Port of Portland, Maine (New York) U.S.A.

No. in Survey held at So. Portland, Maine Date, First Survey 27th August Last Survey 23rd October 1942  
 Reg. Book. Continuous (Number of Visits Continuous)

on the s.s. "OCEAN ANGEL" Tons 7178 Gross  
4280 Net

Built at So. Portland, Maine By whom built Todd-Bath Iron Shipbuilding Corp. Yard No. 26 When built 1942

Engines made at Lachine, P.Q. By whom made Dominion Eng. Works Ltd. Engine No. 48 When made 1942

Boilers made at Schenectady, New York By whom made American Locomotive Co. Boiler No. S73, 74, 76 When made 1941

Registered Horse Power x Owners British Ministry of War Transport Port belonging to

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 Carrying Dry & Perishable Cargoes.

**ENGINES, &c.**—Description of Engines Triple Expansion Revs. per minute 76

Dia of Cylinders 24½ 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 Mid. length breadth 24½ Thickness parallel to axis 9" & 9½" L.P.  
 as fitted 14½" Crank webs 9" & 9½" L.P. Thickness around eye-hole 6.625"

Intermediate Shafts, diameter as per Rule 13.32" Thrust shaft, diameter at collars as per Rule 13.97"  
 as fitted 13.5" as fitted 14-1/4"

Tube Shafts, diameter as per Rule none Screw Shaft, diameter as per Rule 14.86" Is the tube shaft fitted with a continuous liner x  
 as fitted none as fitted 14.25" Is the screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule .75" Thickness between bushes as per Rule .56" Is the after end of the liner made watertight in the propeller boss yes  
 as fitted .78" as fitted .69" If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length tight fit.

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 no

If two liners are fitted, is the shaft lapped or protected between the liners x Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft no If so, state type x Length of Bearing in Stern Bush next to and supporting propeller 511"

Propeller, dia. 18.6" Pitch 16.0" 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 x Stroke x Can one be overhauled while the other is at work x

Bilge Pumps worked from the Main Engines, No. two Diameter 4½" Stroke 26" Can one be overhauled while the other is at work yes

Feed Pumps (No. and size Two 12"x8"x24", One 9x6x10" Pumps connected to the Main Bilge Line { No. and size 2 @ 4½"x26" and One Duplex 10"x11"x12"  
 How driven Steam Steam How driven Main Engine Steam

Ballast Pumps, No. and size One 10"x11"x12" (Duplex) Lubricating Oil Pumps, including Spare Pump, No. and size None

Are two independent means arranged for circulating water through the Oil Cooler x Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 5 @ 3", 1 portable hose connection 2½"

In Pump Room x In Holds, &c. 2 @ 3" in each hold, 1 @ 5" in each deep tank.

(main bilge line size)

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 10" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 5" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes No. Strainers on Bilge Wells. no

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 or 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 Below

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 no

What Pipes pass through the bunkers Bilge & Ballast Pipes How are they protected Strong wood casings.

What pipes pass through the deep tanks none Have they been tested as per Rule x

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 x

**MAIN BOILERS, &c.**—(Letter for record S) Total Heating Surface of Boilers 7140 sq. feet.

Which Boilers are fitted with Forced Draft 3 main Which Boilers are fitted with Superheaters 3 main

No. and Description of Boilers 3 Multibular Scotch Marine Working Pressure 220 lb. per sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? x

Can the donkey boiler be used for domestic purposes only x

**PLANS.** Are approved plans forwarded herewith for Shafting 22/8/41 Main Boilers 28/4/41 Auxiliary Boilers x Donkey Boilers x  
 (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 complete (2 halves).  
1 Spare Propeller.

The foregoing is a correct description

*T. B. Pinkham*  
TODD-BATH IRON SHIPBUILDING CORP.

Manufacturer.



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Dates of Survey while building  
 During progress of work in shops - -  
 Continuous from 27th August, 1942, until 23rd October, 1942.  
 During erection on board vessel - - -  
 Total No. of visits

Dates of Examination of principal parts — Cylinders 3rd June, 28th July, 6th August, 1942 Slides 3rd June, 28th July, 6th August, 1942 Covers 3rd June, 28th July, 6th August, 1942  
 Pistons 3rd June, 28th July, 6th August, 1942 Piston Rods 24th August, 1942 Connecting rods 24th August, 1942  
 Crank shaft 24th August, 1942 Thrust shaft 24th August, 1942 Intermediate shafts 7, 8, 10, 22 September, 1942  
 Tube shaft x Screw shaft 11th May, 1942 Propeller 20th May, 1941  
 Stern tube 20th September, 1942 Engine and boiler seatings 3rd October, 1942 Engines holding down bolts 3rd October, 1942  
 Completion of fitting sea connections 26th September, 1942.  
 Completion of pumping arrangements 9th October, 1942 Boilers fixed 3rd Oct. 1942 Engines tried under steam 10th October, 1942.  
 Main boiler safety valves adjusted 5th Oct. 1942 Thickness of adjusting washers No washers - lock nuts.  
 Crank shaft material O.H. Steel Identification Mark Lloyd's 3883 H.S. Thrust shaft material O.H. Steel Identification Mark Lloyd's 5469  
 Lloyd's 3844, 4655, 3706, 3726,  
 Intermediate shafts, material O.H. Steel Identification Marks 3763, 3800 Tube shaft, material x Identification Mark x  
 Screw shaft, material O.H. Steel Identification Mark Lloyd's 4631 CC Steam Pipes, material S.D. Steel Test pressure 660 lbs. Date of Test 17th Sept.  
 Is an installation fitted for burning oil fuel no Is the flash point of the oil to be used over 150°F. x  
 Have the requirements of the Rules for the use of oil as fuel been complied with x  
 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 x  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with x

Is this machinery duplicate of a previous case yes If so, state name of vessel "OCEAN VANGUARD," "OCEAN LIBERTY",  
 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 Montreal Report No. 5736 and New York Rpt. Nos. S73, S74, S76 attached hereto. The machinery has been fitted on board the vessel in accordance with the Rules and approved plans and been tried under working condition with satisfactory 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. 10.42 and tail shaft seen C.L. with notation 3 S.B. (Spt).  
 H.S. 7140, G.S. 172, 220 lbs. F.D. 9 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 ...	\$ 30.00	:	When applied for,
Special ...	\$ 912.34	:	19
Donkey Boiler Fee ...	£ :	:	When received,
Travelling Expenses (if any) £	:	:	5/11 1943 in London

*F. M. S. Keller & self*  
*R. Rogers*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK DEC 30 1942  
 Assigned + LMC-10, 42

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