

REPORT ON OIL ENGINE MACHINERY.

No. 40485

OCT 25 1940

Date of writing Report Sept 24 40 When handed in at Local Office Sept 24 40 Port of New York
 Received at London Office
 in Survey held at New York Date, First Survey May 17th Last Survey Aug. 5th 1940
 Book 1260 on the Single Screw vessel M.V. "BROOKLYN HEIGHTS" ex "MOANA" Tons Gross 1030
Twin Triple Quadruple Tons Net 569
 Built at Stockholm By whom built Södra Varfiels Aktiel Yard No. 50084 When built 1917
 Engines made at Stockholm By whom made Atlas Co. Engine No. 50102 When made 1926
 Key Boilers made at North By whom made Boiler No. When made
 Indicated Horse Power 500 each Owners American Motor Ship Corp. Port belonging to New York (26 Broadway)
 Indicated Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes
 Intended for which vessel is intended Foreign

ENGINES, &c. Type of Engines Air Injection 2 or 4 stroke cycle 2 Single or double acting single
 Maximum pressure in cylinders 550 lbs. Diameter of cylinders 15 7/8" Length of stroke 28 1/4" No. of cylinders 4 No. of cranks 4
 Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 23 3/4" Is there a bearing between each crank Yes
 Revolutions per minute 135 Flywheel dia. 68 1/4" Weight 7 tons Means of ignition compression Kind of fuel used Diesel Oil
 Crank Shaft, dia. of journals as per Rule 9.75 Crank pin dia. 10 1/4" Crank Webs Mid. length breadth 22 11/16 Thickness parallel to axis 5 15/16
as fitted 10 1/4" as fitted 10 1/4" as fitted 7 1/16 Mid. length thickness Thickness around eye-hole solid
 Main Shaft, diameter as per Rule 9.75 Intermediate Shafts, diameter as per Rule 6.47 Thrust Shaft, diameter at collars as per Rule
as fitted 10 1/4" as fitted 7 1/16 as fitted 8 3/8aft end
 Propeller Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 7.22 Is the tube shaft fitted with a continuous liner No
as fitted as fitted 7 13/16" screw
 Liners, thickness in way of bushes as per Rule Thickness between bushes as per rule Is the after end of the liner made watertight in the
as fitted as fitted as fitted
 Oil Gland Oil Gland If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -
 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 -
 If 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
Yes If so, state type compression gland Length of Bearing in Stern Bush next to and supporting propeller 34"
 Propeller, dia. 7'3" Pitch 8'3" No. of blades 4 Material bronze whether Moveable solid Total Developed Surface sq. feet
 Kind of reversing Engines Direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication
 Lubrication sure Thickness of cylinder liners none Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with
 ducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine funnel
 Cooling Water Pumps, No. 4 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 Special arrangements are made for dealing with cooling water if discharged into bilges -
 Pumps worked from the Main Engines, No. one each engine Diameter 4 3/4" Stroke 6 Can one be overhauled while the other is at work Yes
 Connected to the Main Bilge Line No. and Size 4-9.88x6.88x9.88 steam 7 1/2 x 4 1/2 x 10 strokes 1 Elec. 2 on main engines
How driven 1 steam: 1 elect: 2 on engines
 Lubricating Pumps, No. and size 3 9.88x6.88x9.88 Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 steam 2.9x1.77x2.9
7 1/2 x 4 x 10 dependent 1 1/2 x 8
 Independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 No. and size:—In Machinery Spaces Four 5'-1 1/4'-2'-2 1/2' In Pump Room -
Four 5'-1 1/4'-2'-2 1/2'
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 9.88x6.88x9.88 7 1/2 x 4 1/2 x 10 3"x5" suction
 Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces
 easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
 Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes
 Are they fitted 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 above
 Are 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
 How are they protected -
 How are they protected - Have they been tested as per Rule -
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 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 Yes worked from deck level
 On vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -
 Compressors, No. one each engine No. of stages 3 Diameters 13-11 1/2-3 1/4 Stroke 13 1/16 Driven by main engine
 Auxiliary Air Compressors, No. one No. of stages 2 Diameters 2 5/16 Stroke 4" Driven by steam
6 3/4
 Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
 Lubricating Air Pumps, No. 2 on each engine Diameter 25 1/2 Stroke 28.4 Driven by main engine
 Engines crank shafts, diameter double acting No. - Position -
as fitted

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes
 Internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes
 Pressure Air Receivers, No. 3 Cubic capacity of each - Internal diameter 2 13.8" thickness 2 .85"
1 17" 1 1"
 How welded or riveted longitudinal joints seamless Material Steel Range of tensile strength --- Working pressure ---
1 52" Actual 1000 lbs.
 Air Receivers, No. 2 Total cubic capacity 255.5 Internal diameter 1 39" thickness 1 1/2" 1.11/16"
1 39" Working pressure ---
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 How welded or riveted longitudinal joint Welded Material Steel Range of tensile strength --- Working pressure ---



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IS A DONKEY BOILER FITTED? Yes If so, is a report now forwarded? Yes
 Is the donkey boiler intended to be used for domestic purposes only No. Steering gear, windlass, winches, generator and pumps.

PLANS. Are approved plans forwarded herewith for Shaffling Receivers Separate Tanks
 Donkey Boilers General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied Spare Gear supplied in accordance with the Rules.

State the principal additional spare gear supplied

The foregoing is a correct description.

Manufacturer.

Dates of Survey During progress of work in shops - During erection on board vessel -
 Total No. of visits 13
 Dates of Examination of principal parts - Cylinders June 4 & 13, 20, 21, 24, 25, 26, 28th July 2, 8th, Aug. 5th

Crank shaft June 7 & 24 Flywheel shaft same Thrust shaft same Intermediate shafts same Tube shaft -
 Screw shaft June 24 Propeller June 24 Stern tube June 24 Engine sealings - Engines holding down bolts -
 Completion of fitting sea connections June 24 Completion of pumping arrangements July 2 Engines tried under working conditions July 2
 Crank shaft, Material Steel Identification Mark - Flywheel shaft, Material S Identification Mark -
 Thrust shaft, Material S Identification Mark - Intermediate shafts, Material S Identification Marks -
 Tube shaft, Material - Identification Mark - Screw shaft, Material S Identification Mark -

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 No If so, have the requirements of the Rules been complied with -
 Is the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with Yes
 Is this machinery duplicate of a previous case - If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel examined under working conditions and found satisfactory, the workmanship and material appears good. The machinery is eligible in my opinion to be classed with record of LMC 7-40 and notation of Tail Shaft see ^S The vessel was placed on dry dock, port and starboard tail shafts drawn and examined (O.G.) and good. Sea connections opened up and examined. Main engine cylinders, pistons, rods, heads and wrist pins and guides (including Compressor and Scavenge pumps) and crank shafts examined. Steam Diesel Generator cylinders, pistons, rods, heads, and valves, wrist pins and guides and crank shaft examined. Aux. compress. cylinders, pistons, rods, heads, and valves, wrist pins and crank shaft examined. Starting air receivers and daily service tanks examined internally. Witnessed hydraulic test of 1500 lbs. on high pressure air receivers applied by U.S. Inspectors. Main engine fuel and lubricating oil pumps examined. Bilge, ballast, general service and donkey feed pump examined. Pumping arrangements examined.

The amount of Entry Fee .. \$25.00 : When applied for, 26-9-40
 Special ... £ :
 Donkey Boiler Fee ... £ :
 Travelling Expenses (if any) £ :
 Committee's Minute
 Assigned LMC 8.40 D.B.S 8.40
 Note Oil Eng. T.S. 6.40
 O.B.

J. D. O'Connell
 Engineer Surveyor to Lloyd's Register of Shipping

NEW YORK SEP 25 1940

Rpt. 9a. Port of NEW YORK 40485 Continuation of Report No. 40485, dated Sept 24, 1940 on the

Please note:- The two starting air receivers are located in No. 2 hold, all valves and fittings are connected on boiler room side of bulkhead. Connections on bulkhead are watertight. One starting air receiver was removed from the Vessel. The small belt driven air compressor has also been removed from the vessel. The starting air tanks in No. 2 hold are closed in with 3" wood planking, an efficient water-tight door has been fitted in the boiler room bulkhead for access to the tanks.

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