

REC'D NEW YORK NOV 16 1928

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REPORT ON OIL ENGINE MACHINERY.

No. 430.

1 DEC 1928

Received at London Office

of writing Report Nov 6 1928 When handed in at Local OfficePort of Cleveland Ohioin Survey held at Lorain OhioDate, First Survey June 18Last Survey Oct. 11 1928Number of Visits 30

Book.

on the Single
Twin
Triple
Quadruple

Screw vessel

Lanker "MARTHA E. ALLEN"

Tons { Gross 2935
Net 1994at Lorain OhioBy whom built American Shipbuilding CoYard No. 203When built 1928made at AmsterdamBy whom made WerkspoorEngine No. 1928When made 1928Boilers made at LorainBy whom made American Shipbuilding CoBoiler No. 1928When made 1928Horse Power 1400Owners Lake Tankers CorporationPort belonging to Whiting, Ind.Horse Power as per Rule 400 380Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted Yesade for which vessel is intended Great LakesENGINES, &c.—Type of Engines Werkspoor 188 Diesel 25 7/8 or 4 stroke cycle 4 Single or double acting SMaximum pressure in cylinders 500 Diameter of cylinders 460 mm Length of stroke 900 mm No. of cylinders 6 No. of cranks 6In of bearings, adjacent to the Crank, measured from inner edge to inner edge 640 mm Is there a bearing between each crank YesRevolutions per minute 150 Flywheel dia. 1930 mm Weight 4200 kg Means of ignition Comp air Kind of fuel used Diesel oilCrank Shaft, dia. of journals 288 mm as per Rule 288 mm as fitted 300 mm Crank pin dia. 300 mm Crank Webs Mid. length breadth 600 mm Mid. length thickness 200 mm Thickness parallel to axis 200 mm Thickness around eye-hole 144.5 mmFlywheel Shaft, diameter 230 mm as per Rule 230 mm as fitted 230 mm Intermediate Shafts, diameter 300 mm as per Rule 300 mm as fitted 300 mm Thrust Shaft, diameter at collars 215 mm as per Rule 215 mm as fitted 215 mmPropeller Shaft, diameter 8.94 inches as per Rule 8.94 inches as fitted 10 inches Is the screw shaft fitted with a continuous liner NoBronze Liners, thickness in way of bushes None as per Rule None as fitted None Thickness between bushes None as per Rule None as fitted None Is the after end of the liner made watertight in thebell boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner YesThe 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 YesTwo liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the afterof the tube shaft United States Metallic Length of Bearing in Stern Bush next to and supporting propeller 36 inchesPropeller, dia. 9'-6" Pitch 8'-0" No. of blades 4 Material Best Steel whether Moveable Yes Total Developed Surface 30 sq. feetMethod of reversing Engines air Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched Yes Means of lubricationThickness of cylinder liners 38 Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged withconducting material Both If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine YesSuction Water Pumps, No. One for each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel YesGe Pumps worked from the Main Engines, No. one Diameter 90 mm Stroke 330 mm Can one be overhauled while the other is at work Yes, one onPumps connected to the Main Bilge Line No. and Size Attached bilge pumps Ballast pump 8"x8"x12" duplexHow driven Steam driven 2 H.P. electric Hand fire bilge pumpLast Pumps, No. and size 8"x8"x12" duplex Lubricating Oil Pumps, including Spare Pump, No. and size One geared on each eng.two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary BilgePumps, No. and size:—In Machinery Spaces Two feed pumps 7"x5"x12" Simplex Steam Two boiler oil pumps 3"x2"x5" General service 6"x6"x6" duplex Steam Forward pump roomHolds, &c. after pump room Two cargo pumps 12"x14" duplex motor driven Forward pump roomIndependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one - 4" + one - 6"all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spacesfrom easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yesall Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Valvesthey 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 abovethey 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 Yesat pipes pass through the bunkers None How are they protected Yesat pipes pass through the deep tanks None Have they been tested as per Rule Yesall 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

partment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door No worked from Yes

wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

In Air Compressors, No. one No. of stages 3 Diameters 440-380-90 mm Stroke 330 mm Driven by EngineAuxiliary Air Compressors, No. one No. of stages 3 Diameters 440-350-90 mm Stroke 220 mm Driven by Engineall Auxiliary Air Compressors, No. one No. of stages 3 Diameters 440-350-90 mm Stroke 220 mm Driven by SteamRevolving Air Pumps, No. one Diameter 440 mm Stroke 330 mm Driven by EngineAuxiliary Engines crank shafts, diameter 185 mm as per Rule 185 mm as fitted 185 mmRECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yesthe internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces 12"x16" mandrelsThere a drain arrangement fitted at the lowest part of each receiver YesHigh Pressure Air Receivers, No. Two Cubic capacity of each 400 L. Internal diameter 440 mm thickness 12 1/2 mmSeamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 28/32 tons Working pressure by Rules 45 kgStarting Air Receivers, No. Two Total cubic capacity 800 cu ft. Internal diameter 440 mm thickness 1 1/2 mmSeamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 28/32 tons Working pressure by Rules 350 kg

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IS A DONKEY BOILER FITTED? Yes

If so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shifting

(If not, state date of approval)

See surveyor's Report

Receivers

Yes Storage

Separate Tanks

Donkey Boilers

Yes

General Pumping Arrangements

Yes

Oil Fuel Burning Arrangements

Yes

SPARE GEAR

See surveyor's Report NO 11041² Amsterdam

The foregoing is a correct description,

The American Ship Building Co

Manufacturer.

Dates of Survey while building { During progress of work in shops - - See surveyor's Report 11041² Amsterdam
During erection on board vessel - - June 18. July 2 4. 5. 6. 16. 17. 18. 19. 20. 21. 23. 24. 26. 28. 30. Aug. 4. 6. 9. 10.
Total No. of visits 30.

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
Crank shaft Flywheel shaft Thrust shaft Intermediate shafts April 1 Tube shaft
Screw shaft June 15 Propellers June 15 Stern tube Feb 23 Engine seatings July 14 Engines holding down bolts Aug. 15
Completion of fitting sea connections June 9 Completion of pumping arrangements Aug 4 Engines tried under working conditions Sept 6
Crank shaft, Material Steel Identification Mark Lloyds GQ 947 948. 25/11/27 Flywheel shaft, Material Steel Identification Mark Lloyds J. 2
Thrust shaft, Material Steel Identification Mark Lloyds. MK. 946. 30/11/27 Intermediate shafts, Material Steel Identification Marks Lloyds. 12-29
Tube shaft, Material Steel Identification Mark Lloyds. 12-29 Screw shafts Material Steel Identification Mark Lloyds. 12-29

Is the flash point of the oil to be used over 150° F. Yes

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.) The machinery of this vessel has been built under special survey & in accordance with the Rules & approved plans. (See Amsterdam surveyor's Report Nos. 11041² 11041⁶ & 10975) The main engines have been fitted on board in a satisfactory manner & furnished with spare gear as required by the Rules. They have been tried out under working conditions, with satisfactory results. This vessel is eligible in my opinion for record I L M C 10.28. in the Register Book.

The amount of Entry Fee ... £ : :
Mach. installation ... £ : :
Special ... £ : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, Oct 15 1928
When received, 10. 12. 28

G. Drummond
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK NOV 21 1928

Assigned + L M C 10.28

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Foundation