

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 Office 10 25 Port of Cleveland Ohio

in Survey held at Lorain Ohio Date, First Survey June 18 Last Survey Oct. 11 1928
Number of Visits 30

on the Single Twin Triple Quadruple Screw vessel Lanker "MARTHA E. ALLEN" Tons Gross 2935
Net 1994

at Lorain Ohio By whom built American Shipbuilding Co Yard No. 203 When built 1928

Engines made at Amsterdam By whom made Werkspoor Engine No. When made 1928

Boilers made at Lorain By whom made American Shipbuilding Co Boiler No. When made 1928

Indicated Horse Power 1400 Owners Lake Tankers Corporation Port belonging to Whiting, Ind.

Net Horse Power as per Rule 400 380 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Great Lakes

ENGINES, &c.—Type of Engines Werkspoor Diesel 25 7/8 or 4 stroke cycle Single or double acting S

Maximum pressure in cylinders 500# Diameter of cylinders 460 mm Length of stroke 900 mm No. of cylinders 6 No. of cranks 6

Position of bearings, adjacent to the Crank, measured from inner edge to inner edge 640 mm Is there a bearing between each crank Yes

Revolutions per minute 150 Flywheel dia. 1930 mm Weight 4200 kg Means of ignition Comp. air Kind of fuel used Diesel oil

Crank 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 Thickness parallel to axis 200 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 mm

Propeller Shaft, diameter 8.94" as per Rule 8.94" as fitted 10" Is the screw shaft fitted with a continuous liner No

Brass 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 the

stern boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes

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 Yes

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after

end of the tube shaft United States Metallic Length of Bearing in Stern Bush next to and supporting propeller 36"

Propeller, dia. 9'-6" Pitch 8'-0" No. of blades 4 Material Best Steel whether Moveable Yes Total Developed Surface 30 sq. feet

Method of reversing Engines air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication oil

Thickness of cylinder liners 38 Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

conducting 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 Yes

Working Water Pumps, No. One for each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Ballast 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 on each engine

Pumps connected to the Main Bilge Line No. and Size Attached bilge pumps, Ballast pump 8"x8"x12" duplex How driven Steam driven, 2 H.P. electric, Hand fire bilge pump.

Ballast Pumps, No. and size 8"x8"x12" duplex Lubricating Oil Pumps, including Spare Pump, No. and size one geared on each eng. + Standby 8"x4"x12 duplex steam

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces Two feed pumps 7"x5"x12 duplex steam, Fuel transfer pump 14"x6"x10" duplex steam, Lubricating oil pumps 3"x2"x5"

Holds, &c. after pump room, Forward cargo pumps 12"x14" duplex motor driven, Forward pump room

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one - 4" + one - 6"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

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 Valves

Are they 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 above

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 Yes

How are they protected Yes Have they been tested as per Rule Yes

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

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

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

Auxiliary Air Compressors, No. one No. of stages 3 Diameters 440-380-90 mm Stroke 330 mm Driven by main engine

Auxiliary Air Compressors, No. one No. of stages 3 Diameters 440-350-90 mm Stroke 220 mm Driven by auxiliary engine

Revolving Air Pumps, No. Diameter Stroke Driven by steam

Auxiliary Engines crank shafts, diameter 185 mm as per Rule 185 mm as fitted 185 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Are the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces 12"x16" manholes

Is there a drain arrangement fitted at the lowest part of each receiver Yes

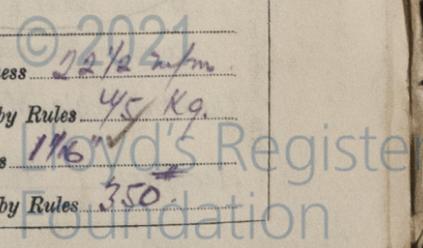
High Pressure Air Receivers, No. 400 Cubic capacity of each 400 L Internal diameter 440 mm thickness 12 1/2 mm

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 28/32 tons Working pressure by Rules 45 kg

Starting Air Receivers, No. 400 Total cubic capacity 800 cu ft Internal diameter 440 mm thickness 1 1/2 mm

Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 28/32 tons Working pressure by Rules 350

Note: Supercharger fitted 3. 38 (See Seeley letter 5.10.37.)



IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

PLANS. Are approved plans forwarded herewith for Shafting *See surveyors Report 11041^a Amsterdam* Receivers *Yes* Storage *Yes* Separate Tanks *Yes*
Donkey Boilers *Yes* General Pumping Arrangements *Yes* Oil Fuel Burning Arrangements *Yes*

SPARE GEAR *See surveyors Report NO 11041^a 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 surveyors Report 11041^a Amsterdam*
During erection on board vessel - - *June 18, July 2, 4, 5, 6, 16, 14, 18, 19, 20, 21, 23, 24, 26, 28, 30, Aug 4, 6, 9, 10, 14, 20, 21, 25, 27, 31, Sept. 4, 6, 13, 15, 16, Oct. 3 + 11.*
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 - Tube shaft -
Screw shafts *June 15* Propellers *June 15* Stern tubes *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. 2/11/27*
Thrust shaft, Material *Steel* Identification Mark *Lloyds. Mk. 946. 30/11/27* Intermediate shafts, Material *Steel* Identification Marks *Lloyds. 12/1-29*
Tube shaft, Material *Steel* Identification Mark *Lloyds. 12/1-28* Screw shafts Material *Steel* Identification Mark *Lloyds. 12/1-28*

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 surveyors Report Nos. 11041^a 11041^b & 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 LMC 10.28. in the Register Book.*

Certificate (if required) 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 ... £ :
Mch. installation ... *\$200.00* : When applied for, *Oct 15 1928*
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ : When received, *10.12.28*

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

Committee's Minute
Assigned *+ LMC 10.28*
NEW YORK NOV 21 1928



Note oil, eng.