

REPORT ON OIL ENGINE MACHINERY.

No. 13659

27 MAR 1936

Date of writing Report 20 March 1936 When handed in at Local Office 19 Port of Amsterdam

No. in Survey held at Amsterdam & Hingelo Date, First Survey 24 May 1935 Last Survey 10 March 1936 Reg. Book. Number of Visits 59.

on the ^{Single} ~~Double~~ ^{Triple} ~~Quadruple~~ Screw Vessel *Mota* Yard No. 193 M.V. ~~ETREMA~~ "ETREMA" Tons Gross 6256 Net 5606

Built at Rotterdam By whom built N.V. Rotterdam dry dock Yard No. 193 When built 1936
Engines made at Amsterdam By whom made M.M. N.V. Werkspoor Engine No. When made 1936
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power 2800 Owners Port belonging to
Nom. Horse Power as per Rule 377 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
Trade for which vessel is intended 25 9/16 55 1/8

OIL ENGINES, &c.—Type of Engines *Diesel* ~~airless~~ *injection* ~~supercharge~~ 2 or 4 stroke cycle 4 Single or double acting *single*
Maximum pressure in cylinders 700435 Diameter of cylinders 650mm Length of stroke 1400mm No. of cylinders 6 No. of cranks 6
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 834mm Is there a bearing between each crank *yes*

Revolutions per minute 120 Flywheel dia. 2260mm Weight *600kg* Means of ignition *sparkers* Kind of fuel used *crude oil*
Crank Shaft, dia. of journals as per Rule 444mm as fitted 460mm Crank pin dia. 460mm Mid. length breadth 870mm Thickness parallel to axis
Crank Webs Mid. length thickness 290mm Thickness around eye-hole

Flywheel Shaft, diameter as per Rule *approved* as fitted 340mm Intermediate Shafts, diameter as per Rule *approved* as fitted 350mm Thrust Shaft, diameter at collar as per Rule *approved* as fitted 340mm
Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule *approved* as fitted 370mm Is the ^{lub} screw shaft fitted with a continuous liner *yes*

Bronze Liners, thickness in way of bushes as per Rule *approved* as fitted 19.5mm Thickness between bushes as per rule *approved* as fitted 15mm 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

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 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 1500mm

Propeller, dia. 4270mm Pitch 3500mm No. of blades 4 Material *bronze* whether Moveable *no* Total Developed Surface 62 sq. feet
Method of reversing Engines *by hand* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubrication *forced*

Thickness of cylinder liners 55mm Are the cylinders fitted with safety valves *yes* Are the exhaust pipes and silencers water cooled or lagged with non-conducting material *lagged* the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine
Cooling Water Pumps, No. 2 *salt water* & 2 *fresh water* Is the sea suction provided with an efficient strainer which can be cleared within the vessel
What special arrangements are made for dealing with cooling water if discharged into bilges

Bilge Pumps worked from the Main Engines, No. 2 Diameter *rotary type* Stroke *35 ton/hour* Can one be overhauled while the other is at work *yes*
Pumps connected to the Main Bilge Line No. and Size 2 *rotary pumps* & 1 *general service pump* 8" x 8" x 10" How driven *main motor* *steam duplex*

Ballast Pumps, No. and size *one* 8" x 8" x 10" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *one* *rotary* 40 *ton/hour* 8" x 8" x 10" *duplex*
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 In Pump Room

In Holds, &c.
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions in the Machinery Spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers How are they protected
What pipes pass through the deep tanks 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

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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

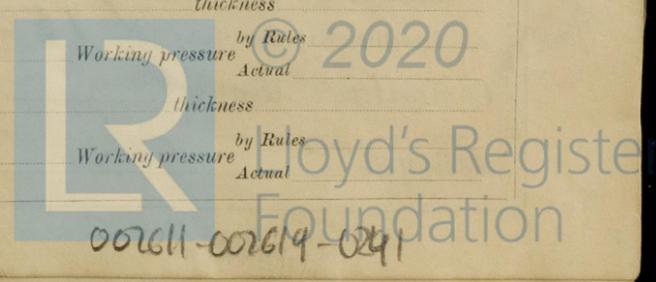
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
Main Air Compressors, No. No. of stages Diameters Stroke Driven by
Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 206-184 Stroke 160mm Driven by *by steam engine* *diesel motor*

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by
Scavenging Air Pumps, No. Diameter Stroke Driven by
Auxiliary Engines crank shafts, diameter as per Rule as fitted No. Position

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule
Can the internal surfaces of the receivers be examined and cleaned Is a drain fitted at the lowest part of each receiver

High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual



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