

REPORT ON OIL ENGINE MACHINERY

No. 10472

13 JAN 1927

Received at London Office

Date of writing Report 3 January 1927 When handed in at Local Office 10 1/2

Port of AMSTERDAM

No. in Survey held at AMSTERDAM

Date, First Survey 15 August

Last Survey 1 December 1926

Reg. Book.

Number of Visits 22

on the ~~Steam~~
~~Tug~~
Triple
Quadruple Screw vessel OIL ENGINE NO. 3822 for M.V. "SHAZA"Tons
Gross
Net

Built at **Bolnes** By whom built **N.V. Boele's Scheepswerven & Yard No. -** When built **1926**
Engines made at **Amsterdam** By whom made **N.V. Kromhout Motoren Fabriek** Engine No. **3822** When made **1926**
Donkey Boilers made at **-** By whom made **-** Boiler No. **-** When made **-**
Brake Horse Power **180** Owners **Ned Ind Tank Stoomboot My** Port belonging to **Rotterdam.**
Nom. Horse Power as per Rule **80** Is Refrigerating Machinery fitted for cargo purposes **<** Is Electric Light fitted **<**
Trade for which vessel is intended **<**

OIL ENGINES, &c.—Type of Engines **Kromhout Oil Engine** 2 stroke cycle Single or double acting
Maximum pressure in cylinders **214 lb per sq. in.** Diameter of cylinders **15 3/4 x 400 mm** Length of stroke **450 mm** No. of cylinders **4** No. of cranks **4**
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **460 mm** Is there a bearing between each crank **Yes**
Revolutions per minute **240** Flywheel dia. **950 mm** Weight **450 kg** Means of ignition **ignition plates** Kind of fuel used **Gas oil**
Crank Shaft, dia. of journals **as per Rule** Crank pin dia. **140 mm** Crank Webs **Mid. length breadth 256 mm** Thickness parallel to axis **shrunk**
Flywheel Shaft, diameter **as per Rule** Intermediate Shafts, diameter **as per Rule** Thrust Shaft, diameter at collars **as per Rule**
Tube Shaft, diameter **as per Rule** Screw Shaft, diameter **as per Rule** Is the **tube** shaft fitted with a continuous liner **Yes**
Bronze 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 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 **one length**
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 **tight fit**
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 **<**
Length of Bearing in Stern Bush next to and supporting propeller **660 mm**
Propeller, dia. **1460 mm** Pitch **1470 mm** No. of blades **4** Material **bronze** whether Moveable **Solid** Total Developed Surface **15.93** sq. feet
Method of reversing Engines **Reverse** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **governor** Means of lubrication **forced**
Thickness of cylinder liners **<** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water cooled or lagged with non-conducting material **Cooled** If 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** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **<**
Bilge Pumps worked from the Main Engines, No. **2** Diameter **115 mm** Stroke **50 mm** Can one be overhauled while the other is at work **Yes**
Pumps connected to the Main Bilge Line { No. and Size **<** How driven **<** *Lubrication pumps 2 x 9 feet (one spare)*
Ballast Pumps, No. and size **<** Lubricating Oil Pumps, including Spare Pump, No. and size **2 Light feed**
Are two independent means arranged for circulating water through the Oil Cooler **<** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces **<**
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 **Rearwall 2.5 x 4.5**
Main Air Compressors, No. **1** No. of stages **2** Diameters **4 1/2 x 3 1/4** Stroke **4** Driven by **Main engine**
Auxiliary Air Compressors, No. **1** No. of stages **2** Diameters **<** Stroke **<** Driven by **aux. engine**
Small Auxiliary Air Compressors, No. **hand driven compressor for initial starting** No. of stages **<** Diameters **<** Stroke **<** Driven by **hand driven**
Scavenging Air Pumps, No. **<** Diameter **<** Stroke **<** Driven by **<**
Auxiliary Engines crank shafts, diameter **as per Rule** **as fitted** **45 mm**

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule **Yes**Can the internal surfaces of the receivers be examined **Yes** What means are provided for cleaning their inner surfaces **Manhole**Is there a drain arrangement fitted at the lowest part of each receiver **Yes**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 **<**Starting Air Receivers, No. **2** Total cubic capacity **2300 Ltr** Internal diameter **1' 3 1/4"** thickness **1/4"**Seamless, lap welded or riveted longitudinal joint **riveted** Material **Steel** Range of tensile strength **28/10 ton** Working pressure by Rules **21 kg**

IS A DONKEY BOILER FITTED? ☒

If so, is a report now forwarded? ☒

PLANS. Are approved plans forwarded herewith for Shafting ☒

Receivers ☒

Separate Tanks ☒

Office

Donkey Boilers ☒

General Pumping Arrangements ☒

Oil Fuel Burning Arrangements ☒

SPARE GEAR

1 crankcase air valve, 1 gudgeon pin, 1 combustion chamber
1 piston with rings complete, 1 set of piston rings, 2 bottom end bolts
And nuts, 1 fuel pump complete, Quantity assorted bolts
And nuts, 1 set of valves for cooling and bilge pumps,
1 b spray nozzle, 1 set of compression springs, 1 ignition
plate, 1 valve for air starter, one set of valves for fuel discharge pump,
2 studs for main bearings, 1 nozzle for rapid heater, 1 set for oil, 2 steel
flats for gudgeon pin, 1 screw shaft with couplings complete.

The foregoing is a correct description,

N.V. KROMHOUT MOTOREN FABRIEK

D. GOEDKOOP Jr.

Manufacturer.

Dates of Survey while building
During progress of work in shops - 15/10, 23/10, 25/10, 14/11, 24/11, 24/11, 25/11, 4/12, 12/12, 22/12, 30/12, 7/1, 13/1, 14/1, 20/1, 21/1, 23/1, 24/1, 27/1
During erection on board vessel - ☒
Total No. of visits 22.

Dates of Examination of principal parts—Cylinders 23/10 - 30/11 Covers 23/10 - 30/11 Pistons 25/10 - 22/11 Rods ☒ Connecting rods 23/10 - 14/11

Crank shaft 15/10 - 14/11 Flywheel shaft ☒ Thrust shaft 20/12 - 24/12 Intermediate shafts 20/12 - 24/12 Tube shaft ☒

Screw shaft 20/12 - 24/12 Propeller 24/12 Stern tube ☒ Engine seatings ☒ Engines holding down bolts ☒

Completion of fitting sea connections ☒ Completion of pumping arrangements ☒ Engines tried under working conditions ☒

Crank shaft, Material Steel Identification Mark 44502 4.6.24 Flywheel shaft, Material ☒ Identification Mark

Thrust shaft, Material Steel Identification Mark 44502 6.10.26 Intermediate shafts, Material Steel Identification Marks 44502 8.12.26

Tube shaft, Material ☒ Identification Mark ☒ Screw shaft, Material Steel Identification Mark 44502 8.12.26

Is the flash point of the oil to be used over 150° F. Yes ☒ Spar run shaft 44502 8.12.26

Is this machinery duplicate of a previous case Yes ☒ If so, state name of vessel M.V. 'Lessa'

General Remarks (State quality of workmanship, opinions as to class, &c.)

The oil engine has been made in accordance with the approved plans and Secretary's letter, Rules. All material tested as required and workmanship good. Engine tried on test bench and satisfactory.

The machinery is intended for the M.V. 'Lessa' in course of construction by Messrs. N.V. Boek's Scheepwerf en Machinefabriek at Bolnes. The engines have been forwarded to the builders.

The amount of Entry Fee ... £ 15: -
1/3. Special ... £ 180: -
Donkey Boiler Fee ... £ 2: -
Travelling Expenses (if any) £ 18: -

When applied for,

19

When received,

10.1.27

Committee's Minute

FRI. 22 APR 1927

Assigned

See Rob. rpt. 16309

F. V. Beemster
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation