

# REPORT ON OIL ENGINE MACHINERY

No. 10472

3 JAN 1927

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 Reg. Book. 10472 Number of Visits 22

on the Triple Screw vessel OIL ENGINE NO. 3822 for M.V. "SHAZA" Tons Gross  
Quadruple 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 shrunk Mid. length breadth 226 mm Thickness parallel to axis Solid  
as fitted 140 mm Mid. length thickness 96 mm Thickness around eye-hole Solid  
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule  
as fitted 135 mm as fitted 135 mm  
 Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner Yes  
as fitted 150 mm screw  
 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  
as fitted 12 mm as fitted 11 mm 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 Cast Iron whether Moveable Solid Total Developed Surface 15.93 sq. feet  
 Method of reversing Engines Air reversing 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 125 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 feeds (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 Revarnished  
 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 1/2"  
 Seamless, lap welded or riveted longitudinal joint riveted Material Steel Range of tensile strength 28/35 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 Plans Receivers London Separate Tanks Office  
(If not, state date of approval) 4/9/26 23/10/26 29/11/26 Att. L. Secretary  
Donkey Boilers  General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR 4 Donkey air valves, 1 gudgeon pin, 2 combustion chambers  
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 lb spray nozzle, 1 set of compression springs, 6 ignition  
plates, 1 valve for air starter, one set of valves for fuel discharge pump,  
2 studs for main beams, 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. D. Goedkoop Manufacturer.

Dates of Survey while building  
During progress of work in shops - 15/8, 23/8, 25/8, 14/9, 24/10, 24/10, 25/10, 4/11, 12/11, 22/11, 30/11, 7/12, 13/12, 14/12, 20/12, 22/12, 23/12, 24/12, 27/12  
During erection on board vessel -   
Total No. of visits 28

Dates of Examination of principal parts - Cylinders 23/8 - 30/11 Covers 23/8 - 30/11 Pistons 25/8 - 22/11 Rods  Connecting rods 23/8 - 14/12  
Crank shaft 15/8 - 14/9 Flywheel shaft  Thrust shaft 20/12 - 27/12 Intermediate shafts 20/12 - 27/12 Tube shaft   
Screw shaft 20/12 - 27/12 Propeller 27/12 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 4.9.5.03 4.6.24 Flywheel shaft, Material  Identification Mark   
Thrust shaft, Material Steel Identification Mark 4.9.14.26 6.10.26 Intermediate shafts, Material Steel Identification Marks 4.4.12.12 4.4.12.12  
Tube shaft, Material  Identification Mark  Screw shaft, Material Steel Identification Mark 4.4.12.12 4.4.12.12  
Is the flash point of the oil to be used over 150° F. Yes Spas run shaft 4.4.12.12 4.4.12.12

Is this machinery duplicate of a previous case Yes If so, state name of vessel M.V. "Lera"

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 matters tested as required and workmanship  
good. Engine tried on test bench and satisfactory.

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

The amount of Entry Fee ... £ 25:- :  
1/3. Special ... £ 180:- :  
Donkey Boiler Fee ... £ 2:- :  
Travelling Expenses (if any) £ 18:- :  
When applied for, 19  
When received, 19

P. V. Bennett  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 22 APR 1927  
Assigned See Rob. rpt. 16309

