

Rpt. 4b.  
Comm. 684738

# REPORT ON OIL ENGINE MACHINERY.

No. 266

Received at London Office

JUL -7 1938

Date of writing Report 25.6.1938 When handed in at Local Office 2.7.1938 Port of Düsseldorf  
 No. in Survey held at Cologne Date, First Survey 28.1.1938. Last Survey 24.6.1938.  
 Reg. Book. Number of Visits 12  
 on the <sup>Single</sup> ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_  
 Built at Slikerveer By whom built Naamlooze Scheepsbouwwerf Yard No. 218 When built 1938  
 v/h De Groot & van Vliet 480738/45  
 Engines made at Cologne By whom made Humboldt-Deutzmotoren Engine No. / When made 1938  
 Donkey Boilers made at By whom made Boiler No. When made  
 Brake Horse Power 400 Owners Port belonging to  
 Nom. Horse Power as per Rule 94 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
 Trade for which vessel is intended

**OIL ENGINES, &c.** Type of Engines Heavy oil engine R.V.8 M 345 2 or 4 stroke cycle 4 Single or double acting single  
 Maximum pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 280 mm Length of stroke 450 mm No. of cylinders 8 No. of cranks 8  
 Mean Indicated Pressure 6.6 kg/cm<sup>2</sup> Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 307.5 mm Is there a bearing between each crank yes  
 Revolutions per minute 300 Flywheel dia. 1250 mm Weight 2600 kg Means of ignitions sol. inject Kind of fuel used on test bed gas oil  
 Crank Shaft, { Solid forged as per Rule dia. of journals 190 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 340 mm Thickness parallel to axis  
 { Semi built as fitted { All built as fitted { Mid. length thickness 70 mm Thickness around eyehole  
 Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule 115 as fitted Thrust Shaft, diameter at collars as per Rule as fitted  
 Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the { tube } shaft fitted with a continuous liner { screw }

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted Is the after end of the liner made watertight in the propeller boss  
 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 If so, state type Length of Bearing in Stern Bush next to and supporting propeller  
 Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet  
 Method of reversing Engines directly 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 25 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes ~~water~~ 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. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
 Bilge Pumps worked from the Main Engines, No. one Diameter 100 mm Stroke 100 mm Can ~~xxx~~ be overhauled while ~~xxxxx~~ is at work yes  
 Pumps connected to the Main Bilge Line { No. and Size \_\_\_\_\_ How driven \_\_\_\_\_  
 Is the cooling water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements 1 tooth wheel pump  
 Main Engine ~~XXXXXX~~ Driven Lubricating Oil Pumps, including Spare Pump, No. and size capacity 80 lts/min at 1400 rev.p.min.  
 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 Pump Room  
 In Holds, &c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Are the Bilge Suctions in the Machinery Spaces  
 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. one No. of stages two Diameters 145/60 mm Stroke 100 mm Driven by main engine  
 Small Auxiliary Air Compressors, No. No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
 What provision is made for first Charging the Air Receivers  
 Scavenging Air Pumps, No. Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
 Auxiliary Engines crank shafts, diameter as per Rule as fitted No. \_\_\_\_\_ Position \_\_\_\_\_  
 Have the Auxiliary Engines been constructed under special survey Is a report sent herewith

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fitted

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Shipping

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**AIR RECEIVERS:**—Have they been made  by survey  **yes** Are reports or certificates now forwarded  **attached to the** of this report  **the Rotterdam Office**

Is each receiver, which can be isolated, fitted with a safety valve as per Rule  **yes** Is a drain fitted at the lowest part of each receiver  **yes**

Can the internal surfaces of the receivers be examined and cleaned  **yes**

**Injection 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.** **two** **Total cubic capacity** **2 x 500 lts** **Internal diameter** **450 mm** **thickness** **12 mm**

Seamless, lap welded or riveted longitudinal joint **lap welded** **Material** **S.M. Steel** **Range of tensile strength** **38/44 kg/cm<sup>2</sup>** **Working pressure** by Rules ..... Actual **30 kgs/cm<sup>2</sup>**

**IS A DONKEY BOILER FITTED?**  **yes** If so, is a report now forwarded?  **yes**

Is the donkey boiler intended to be used for domestic purposes only  **yes**

**PLANS.** Are approved plans forwarded herewith for Shafting **212480** **1.9.36** Receivers **G.O.244** **21.7.32** Separate Fuel Tanks

Donkey Boilers ..... General Pumping Arrangements ..... Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements .....

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied  **yes**

State the principal additional spare gear supplied

**Identification marks of Air receivers.**

No. 1051 1052

LLOYD'S TEST

60 atm

W.P. 30 atm

H.K. 28. 1. 38.

The foregoing is a correct description,  
**Humboldt-Deutzmotoren**

*Angewandte Maschinenbau* Manufacturer.

Dates of Survey while building

During progress of work in shops: 28.1., 11.3., 13.4., 22.4., 11.5., 20.5., 23.5., 24.5., 27.5., 30.5., 21.6., 24.6.1938

During erection on board vessel: .....

Total No. of visits .....

Dates of Examination of principal parts—Cylinders 20/5, 23/5, 27/5, 24/6 Pistons 24/6 Rods ..... Connecting rods 22/4, 11/5, 24/6

Crank shaft 13/4, 30/5, 24/6. Flywheel shaft ..... Thrust shaft ..... Intermediate shafts 11/3, 24/6 Tube shaft .....

Screw shaft ..... Propeller ..... Stern tube ..... Engine seatings ..... Engines holding down bolts .....

Completion of fitting sea connections ..... Completion of pumping arrangements ..... Engines tried under working conditions on test bed 21.6.38.

Crank shaft, Material **S.M. Steel** Identification Mark **LLOYD'S 3148 H.B.** Flywheel shaft, Material ..... Identification Mark .....  
Thrust shaft, Material ..... Identification Mark ..... Intermediate shafts, Material **S.M. Steel** Identification Marks **3357 H.B.**  
Tube shaft, Material ..... Identification Mark ..... Screw shaft, Material ..... Identification Mark .....  
24.6.38.

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with  **yes**

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo  **yes** If so, have the requirements of the Rules been complied with  **yes**

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with  **yes**

Is this machinery duplicate of a previous case  **yes** If so, state name of vessel **Maatsch. De Noord, Yard No.559** **Düsseldorf Report No.122**

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

This Heavy Oil Engine has been constructed under special survey in accordance with the Society's Rules and Regulations as well in accordance with the approved plans and instructions therewith. The material used in the construction is good and the workmanship is satisfactory. The engine has been tested on the makers' test in the presence of the undersigned during 10 hours consecutive running under full load and 10 % overload and was found to be in safe working condition during the trials. After the trials all working parts of the engine have been opened out for inspection and were found in good condition. In my opinion the vessel for which this engine is intended will be eligible for the notation of + L.M.C. (with date) when the whole machinery has been fitted satisfactorily on board and tried under full working conditions.

A copy of this report has been forwarded to the Rotterdam Surveyors.

The amount of Entry Fee .. **RM : 40.-** When applied for, **6.7.1938**

Special ... .. **RM : 470.-** When received, **25.8.1938**

Donkey Boiler Fee ... ..

Travelling Expenses (if any) **RM : 60.-**

**Committee's Minute**

Assigned *Sec F.E. machy rpt.*

*Director of R.M. 570 paid see Rondon letter No 11513 H. Pringmann 25-8-38 Engineer Surveyor to Lloyd's Register of Shipping.*

*1/3 of the fee credited to Rotterdam 40*

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Dates of survey while building  
GENE  
The  
Certificate (if required) to be sent to  
The Surveyors are requested not to write on or below the space for Committee's Minute.

