

Rpt. 4b.  
Comm. 684738

# REPORT ON OIL ENGINE MACHINERY.

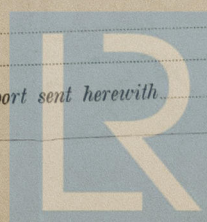
No. 266

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  
Single on the Twin Triple Quadruple Screw vessel Tons { Gross  
Built at Slikerveer By whom built Naamlooze Scheepsbouwwerf Yard No. 218 When built 1938  
Engines made at Cologne By whom made Humboldt-Deutzmotoren Engine No. 480738/45 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 dia. of journals as per Rule 190 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 340 mm Thickness parallel to axis  
Semi built dia. of journals as fitted 190 mm Mid. length thickness 70 mm Thickness around eyehole  
All built as per Rule 115 Thrust Shaft, diameter at collars as per Rule  
Flywheel Shaft, diameter as fitted Intermediate Shafts, diameter as fitted 190 mm as fitted  
Tube Shaft, diameter as fitted Screw Shaft, diameter as fitted Is the { tube screw } shaft fitted with a continuous liner {  
Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes 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 cooled or lagged with  
non-conducting material water 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 two stages capacity 80 lts/min at 1400 rev. p. min.  
Main Engine Driven Lubricating Oil Pumps, including Spare Pump, No. and size  
Ballast Pumps, No. and size Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
Are two independent means arranged for circulating water through the Oil Cooler In Pump Room  
Pumps, No. and size:—In Machinery Spaces  
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 they fitted with Valves or Cocks  
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 the Overboard Discharges above or below the deep water line  
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Blow Off Cocks fitted with a spigot and brass covering plate  
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel How are they protected  
What pipes pass through the bunkers Have they been tested as per Rule  
What pipes pass through the deep tanks  
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 Position  
Have the Auxiliary Engines been constructed under special survey Is a report sent herewith.



© 2021

Lloyd's Register  
011047-011056-0103



**AIR RECEIVERS:**—Have they been made ☒ by survey ☒ yes ☒ Are reports or certificates now forwarded ☒ attached to the of this report of the Rotterdam Office  
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 and cleaned ☒ yes Is a drain fitted at the lowest part of each receiver ☒ 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/mm<sup>2</sup> Working pressure by Rules Actual 30 kgs/cm<sup>2</sup>

**IS A DONKEY BOILER FITTED?**

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  
(If not, state date of approval)

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**

Aktengesellschaft

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, Flywheel shaft ..... Thrust shaft ..... Intermediate shafts 11/3, 24/6 Tube shaft .....  
Screw shaft 24/6. 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

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

If so, have the requirements of the Rules been complied with

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

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 .. 877 : 40.- When applied for, 6.7. 1938  
Special ... 877 : 470.-  
Donkey Boiler Fee ... : : When received, 25.8. 1938  
Travelling Expenses (if any) 877 : 60.-

Committee's Minute

Assigned

Sec F.E. machy rpt.

Düsseldorf

24.12.1938

1/3 of the fee credited to Rotterdam

RM 570 paid See Rondon letter  
H. Brüggemann 25-8-38  
Engineer Surveyor to Lloyd's Register of Shipping.



© 2021

Lloyd's Register Foundation

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)