

# REPORT ON OIL ENGINE MACHINERY.

Received at London Office

MAR 17 1938

Date of writing Report 21.8.37. When handed in at Local Office 24.8. 1937 Port of Dusseldorf

No. in Survey held at Cologne Date, First Survey 20.2.37 Last Survey 20.8. 1937  
Reg. Book. Number of Visits 13

on the **Single** Screw vessel  
**Twin**  
**Triple**  
**Quadruple**

## KERLOGUE

Tons <sup>Gross</sup> \_\_\_\_\_  
<sub>Net</sub> \_\_\_\_\_

Built at **Capelle** By whom built **Messrs. A. Vuyk and Zonen's** Yard No. **642** When built **1937**  
Engines made at **Cologne** By whom made **Messrs. Humboldt-Deutzmoto- ren A.G.** Engine No. **44** When made **1937**  
Donkey Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_  
Brake Horse Power **300 B.H.P.** Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
Nom. Horse Power as per Rule **71 N.H.P.** 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.6 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 **280mm** Length of stroke **450mm** No. of cylinders **6** No. of cranks **6**  
Mean Indicated Pressure **6,6 kg/cm<sup>2</sup>** Flywheel dia. **1250mm** Weight **2600 kg** Means of ignition **sol. inj.** Kind of fuel used **on test bed gas oil**  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **307,5mm** Is there a bearing between each crank **yes**  
Revolutions per minute **300** Crank pin dia. **170mm** Crank Webs Mid. length breadth **325mm** Thickness parallel to axis **shrunk**  
Crank Shaft, { Solid forged as per Rule dia. of journals **190mm** as fitted Crank pin dia. **170mm** Mid. length thickness **70mm** Thickness around eyehole \_\_\_\_\_  
Flywheel Shaft, diameter as per Rule \_\_\_\_\_ Intermediate Shafts, diameter as per Rule **190mm** 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 { \_\_\_\_\_ }  
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 **25mm** Are the cylinders fitted with safety valves **none** Are the exhaust pipes ~~and~~ **xxxxxxx** 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 **100mm** Stroke **85mm** Can ~~be~~ overhauled while ~~xxxxxxx~~ 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 \_\_\_\_\_

Ballast Pumps, No. and size \_\_\_\_\_ **Power Driven Lubricating Oil Pumps**, including Spare Pump, No. and size **1 tooth wheel pump**  
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 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** Stroke **85mm** 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 \_\_\_\_\_

**AIR RECEIVERS:**—Have they been made under survey  **yes** Are reports  certificates now forwarded  attached to the copy of this report sent to 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**

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 **2x500 lbs.** Internal diameter **450mm** thickness **12mm**

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

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

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

**PLANS.** Are approved plans forwarded herewith for Shafting **212481 13.2.35** 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

The foregoing is a correct description,

**Humboldt-Deutzmotoren**

*Humboldt-Deutz Aktiengesellschaft*

Manufacturer.

Dates of Survey while building

- During progress of work in shops-- **2.2.-12.3.-2.6.-28.6.-12.7.-23.7.-26.7.-28.7.-29.7.-3.8.-5.8.-18.8.-20.8.**
- During erection on board vessel--
- Total No. of visits

Dates of Examination of principal parts—Cylinders **23.7.-28.7.37** Covers **26.7.-3.8.-20.8.** Pistons **20.8.37.** Rods **20.2. 12.3. 20.** Connecting rods **20.2. 12.3. 20.**

Crank shaft **28.6.-29.7.20.8.** Flywheel shaft  Thrust shaft  Intermediate shafts **12.7.-3.8.-** 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 **18.8.37 on test**

Crank shaft, Material **S.M. Steel** Identification Mark **LLOYD'S 12238 J.L.28/8.37** Flywheel shaft, Material  Identification Mark

Thrust shaft, Material  Identification Mark  Intermediate shafts, Material **S.M. Steel** Identification Marks **LLOYD'S 2551 H.B.12.7**

Tube shaft, Material  Identification Mark  Screw shaft, Material  Identification Mark

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 **Messrs. Goole Shipb. & Rep. Co. Yard 310 Düsseldorf Report No. 125.**

**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 as in accordance with the approved plans and instructions thereto. The material used in the construction is good and the workmanship is satisfactory. The engine has been tested on the Maker's test bed in the presence of the undersigned during 10 hours consecutively 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. It has been recommended that safety valves are to be fitted to the cylinder heads.

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

The amount of Entry Fee .. **RM : 40.-** When applied for, **Düsseldorf 30.8.1937** **9c No 10508**

Special ... .. **RM : 355.-**

Donkey Boiler Fee ... .. **RM : 60.-** When received, **2-11-1937**

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

*M. Kingemann*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **1/5 of the fee to be credited to Rotterdam**

Assigned **See Rot. J.E. 26650 2-11-37**

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

