

REPORT ON OIL ENGINE MACHINERY.

No. 295.

DEC 14 1938

Received at London Office

Date of writing Report 2.12.38. When handed in at Local Office 10.12. 1938 Port of Düsseldorf

No. in Survey held at Cologne  
Reg. Book.

Date, First Survey 18.2.37

Last Survey 2.12. 19 38

Number of Visits 13

Single  
on the Twin  
Triple  
Quadruple

Screw vessel motor vessel

" MILDRED "

Tons  
Gross  
Net

uilt at Alblasserdam

By whom built My. De Noord

Yard No. 577 When built 1939

Engines made at Cologne

By whom made Humboldt-Deutzmotoren

Engine No. 58 When made 1938

Monkey Boilers made at Amman

By whom made Cochran & Co

Boiler No. 4363 When made 1939

Indicated Horse Power 400

Owners N.V. Tank kustvaart My.

Port belonging to Rotterdam

Norm. Horse Power as per Rule 94

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted Yes

Trade for which vessel is intended

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>

Indicated Pressure 6,6 kg/cm<sup>2</sup> Diameter of cylinders 280mm

Length of stroke 450mm

No. of cylinders 8

No. of cranks 8

Distance 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

Flywheel dia. 1250mm

Weight 2600 kg

Means of ignition solid inject Kind of fuel used on test bed gas oil

Crank Shaft,

Solid forged  
Semi built  
All built

dia. of journals

as per Rule  
as fitted 190mm

Crank pin dia. 170mm

Crank Webs

Mid. length breadth 340mm

Mid. length thickness 70mm

Thickness parallel to axis

Thickness around eyehole

Intermediate Shaft, diameter

as per Rule  
as fitted

Intermediate Shafts, diameter

as per Rule  
as fitted 190mm

Thrust Shaft, diameter at collars

as per Rule  
as fitted

Propeller Shaft, diameter

as per Rule  
as fitted

Screw Shaft, diameter

as per Rule  
as fitted

Is the tube screw shaft fitted with a continuous liner

Brass 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

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 Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes

Means of lubrication

Thickness of cylinder liners 25mm

Are the cylinders fitted with safety valves yes

Are the exhaust pipes and silencers water cooled or lagged with

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

Working Water Pumps, No. one

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Water Pumps worked from the Main Engines, No. one

Diameter 100mm

Stroke 100mm

Can be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line

No. and Size

How driven

Is 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

Main engine

capacity 80 ltrs/min at 1400 r.p.m.

Water Pumps, No. and size

Power Driven Lubricating Oil Pumps, No. and size

1 tooth wheel pump

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

And

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

Are 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

Are pipes pass through the bunkers

How are they protected

Are 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

Department to another

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

Are wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No. one

No. of stages

two

Diameters 145/60mm

Stroke 100mm

Driven by main engine

Are Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Is provision is made for first Charging the Air Receivers

Are Charging Air Pumps, No.

Diameter

Stroke

Driven by

Are Auxiliary Engines crank shafts, diameter

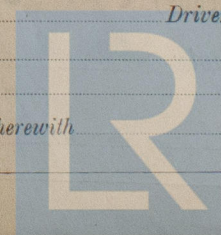
as per Rule  
as fitted

No.

Position

Are the Auxiliary Engines been constructed under special survey

Is a report sent herewith



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**AIR RECEIVERS:**—Have they been made under survey ☒ yes ☐ no State No. of Report or Certificate attached to the copy of this Report sent to Rotterdam Office t. 5e.

Is each receiver, which can be isolated, fitted with a safety valve as per Rule ☒ yes ☐ no  
Can the internal surfaces of the receivers be examined and cleaned ☒ yes ☐ no  
Is a drain fitted at the lowest part of each receiver ☒ yes ☐ no  
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 \_\_\_\_\_  
Starting Air Receivers, No. **two** Total cubic capacity **2 x 500 ltrs.** Internal diameter **450 mm** thickness **12 mm**  
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 **30 kg/cm<sup>2</sup>**  
by Rules **30 kg/cm<sup>2</sup>** Actual **30 kg/cm<sup>2</sup>**

**IS A DONKEY BOILER FITTED?**

Is the donkey boiler intended to be used for domestic purposes only ☒ yes ☐ no  
If so, is a report now forwarded? \_\_\_\_\_

**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 ☐ no

State the principal additional spare gear supplied \_\_\_\_\_

The foregoing is a correct description,

**Manufacturer.** **Klockner-Humboldt-Deutz**  
**Düsseldorfer Maschinenfabrik**  
Dates of Survey while building { During progress of work in shops - - 18.2.-15.6.37-29.9.-3.10.-19.10.-31.10.-2.11.-3.11.-9.11.-12.11.-28.11.-29.11. 2.12.38  
During erection on board vessel - - -  
Total No. of visits **Limers: 2.11.-3.11.-29.11.**  
Dates of Examination of principal parts—Cylinders **31.10.-3.11.-29.11.** Covers **2.11.-29.11.** Pistons **29.11.** Rods \_\_\_\_\_ Connecting rods **3.10.38**  
Crank shaft **29.9.-3.11.-29.11.** Thrust shaft \_\_\_\_\_ Intermediate shafts **18.2.37-29.11.** 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 **28.11.38** test bed \_\_\_\_\_  
Crank shaft, Material **S.M. Steel** Identification Mark **13586 J.L.29/9.38** Flywheel shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_  
Thrust shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_ Intermediate shafts, Material **S.M. Steel** Identification Marks **3603 H.B.**  
Tube shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_ Screw shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_  
Identification Marks on Air Receivers **No. 568 + 580**  
**LLOYD'S TEST**  
**60 Atm.**  
**W.P. 30 Atm.**  
**V.S. 15.6.37.**

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 \_\_\_\_\_ If so, have the requirements of the Rules 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 ☐ no If so, state name of vessel **Messrs. My. De Noord Yard No. 559**  
**Düsseldorf Report 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 as in accordance with the approved plan and instructions thereon. The material ~~xx~~ used in the construction is good and the workmanship satisfactory. The engine has been tested on the Makers' test bed 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 these 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 + L.M.C. (with date) when the whole machinery has been fitted satisfactorily on board and tried under full working condition.

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

The amount of Entry Fee .. **RM. 40.-** When applied for, **Düsseldorf 13.12.1938**  
Special .. **RM. 470.-** **1/3 of fee credited**  
Donkey Boiler Fee .. **RM. :** When received, **10 Rotterdam**  
Travelling Expenses (if any) **RM. 60.-** **LC. 41.**

Committee's Minute

Assigned

**FRI 4 AUG 1939**

**See Rot. JE 28422**

**H. Hingemann**  
Engineer Surveyor to Lloyd's Register of Shipping

**Lloyd's Register Foundation**