

Belongs to Groningen Report N° 556

pt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 2098.

FEB 13 1939

Received at London Office

Date of writing Report

4<sup>th</sup> Febr. 1938

When handed in at Local Office

6.2.

1939. Port of

Bremen

Date in Survey held at

Mannheim

Date, First Survey

18<sup>th</sup> Aug. 1938

Last Survey

12 Febr. 1939.

Number of Visits

13.

on the Type  
Single  
Triple  
Quadruple

Screw vessel

"M. LINTHORST HOMAN"

Tons

Gross

399.99

Net

255.15

built at

Hooze and

By whom built

Messrs S.J. van der Herff

Yard No.

202

When built

1939.

engines made at

Mannheim

By whom made

Messrs. Motur-Herke Mannheim

Engine No.

41754

When made

1939.

Boilers made at

By whom made

Boiler No.

When made

Indicated Horse Power

300

Owners

Captain H. Schuitema

Port belonging to

Groningen

nom. Horse Power as per Rule

74

Is Refrigerating Machinery fitted for cargo purposes

✓

Is Electric Light fitted

✓

Use for which vessel is intended

✓

ENGINES, &c.—Type of Engines

R. H. 342 Su

2 or 4 stroke cycle

4

Single or double acting

single

Maximum pressure in cylinders

45 atm.

Diameter of cylinders

285 mm

Length of stroke

420 mm

No. of cylinders

6

No. of cranks

6

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge

342 mm

Is there a bearing between each crank

yes

Revolutions per minute

300

Flywheel dia.

1000 mm

Weight

1585 kg

Means of ignition

dir. injected

Kind of fuel used

gas oil and fuel oil

Crankshaft, { Solid forged  
Semi built  
All built

dia. of journals

as per Rule  
as fitted

170 mm

Crank pin dia.

170 mm

Crank Webs

Mid. length breadth

246 mm

Thickened parallel to axis

shrunk

Thickened around eye-hole

✓

Wheel Shaft, diameter

as per Rule  
as fitted

Intermediate Shafts, diameter

as per Rule  
as fitted

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

✓

✓

Liner 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

eller 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 no 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

by hand

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

yes

Means of lubrication

Thickness of cylinder liners

21 mm

Are the cylinders fitted with safety valves

yes

Are the exhaust pipes and silencers water cooled or lagged with

conducting material

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.

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

✓

Pumps worked from the Main Engines, No.

2

Diameter

125 mm

Stroke

60 mm

Can one be overhauled while the other 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

Additional Pumps, No. and size

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

1; 4 low/runner

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

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

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

✓

Do all pipes pass through the bunkers

✓

How are they protected

✓

Do all 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

✓

On 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.

✓

No. of stages

✓

Diameters

✓

Stroke

✓

Driven by

✓

Small Auxiliary Air Compressors, No.

✓

No. of stages

✓

Diameters

✓

Stroke

✓

Driven by

✓

Is that 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

70 mm

pins

70 mm

journals

65 mm

No.

one

Position

✓

Have the Auxiliary Engines been constructed under special survey

yes

Is a report sent herewith

None see attached

Certificate

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Foundation

009667-009673-0239



AIR RECEIVERS:—Have they been made under survey *yes* ✓ State No. of Report or Certificate *Please see attached Certificate*  
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 *✓*  
Starting Air Receivers, No. *2* Total cubic capacity *2 x 400 lbs* Internal diameter *4 3/4 in* thickness *9.5 mm*  
Seamless, lap welded or riveted longitudinal joint *seamless* ✓ Material *S. M. Steel* ✓ Range of tensile strength *58.5 kg/cm<sup>2</sup>* ✓ Working pressure by Rules *52.6 lb* ✓  
Actual *30.0* ✓

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 *3rd March 38* *Plan No 17938* Receivers *29.4.1936* 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 firm **MOTOREN-WERKE-MANNHEIM** AG, **FORM. BENZ AG. STAT. MOTORENBAU**

Manufacturer.

Dates of Survey while building { During progress of work in shops-- *1938: Aug. 18. 25. Sept. 14. Octob. 3. 5, Nov. 10. 17. Dec. 14. 1939: Jan. 7. 23. 24. 26.*  
During erection on board vessel-- *✓*  
Total No. of visits *13*

Dates of Examination of principal parts—Cylinders *19/1/38 + 24/1/39* Covers *18/1/38 + 24/1/39* Pistons *17/1/38 + 24/1/39* Rods *✓* Connecting rods *24.1.3*  
Crank shaft *7/1/39 + 24/1/39* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *✓* 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 *✓*  
Crank shaft, Material *S. M. Steel* Identification Mark *Lloyd's 215. W. P. 6. 4. 39* Flywheel shaft, Material *✓* Identification Mark *✓*  
Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *✓* Identification Marks *✓*  
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *✓* Identification Mark *✓*

Identification Marks on Air Receivers

*No 2509. Lloyd's Test. 854 lb. W. P. 427 lb. L. S. 15.9. 1938.*  
*No 2510. Lloyd's Test. 854 lb. W. P. 427 lb. L. S. 15.9. 1938.*

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 *✓*

If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This heavy oil main engine and the auxiliary heavy oil engine have been constructed under special survey in accordance with the Soc. Rules & Regulations, as well as with the approved plans and instruction hereto. The main engine as well as the auxiliary engine have been tested on the makers test bed, during several hours, running under full load, 10% overload, and partly loads in the presence of the undersigned, and were found to be in safe working condition during these trials. After these trials the engines have been opened for inspection and all parts were found to be in order the material used in the construction is good and the workmanship was found to be satisfactory.*

*In our opinion the vessel for which these engines are intended will be eligible for the notation of + LMC. (with date) when the whole machinery has been fitted satisfactorily on board, and tried under full working conditions.*

The amount of Entry Fee *4/5 32. 00* : When applied for, *10. 2. 1939.*  
Special *4/5 296. 00* :  
Donkey Boiler Fee *2 63. 00* :  
Test bed trial fee *2 21. 00* :  
Travelling Expenses (if any) *2 130. 00* :  
When received, *3. 3 19 39*

Committee's Minute

Assigned

*See F.E. machy rpt.*

*M. Cluender. W. Petersen.*  
Engineer Surveyor to Lloyd's Register of Shipping.



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