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## REPORT ON OIL ENGINE MACHINERY.

No. 143996

Received at London Office

11 JUN 1946

Writing Report 10-5 1946 When handed in at Local Office

Port of Rotterdam

Date, First Survey 1-2-46

Last Survey 20-5-1946

Number of Visits 15

Survey held at Rotterdam

Book.

on the Single Twin Triple Quadruple Screw vessel

at Duisburg

Mines made at Bolnes

Boilers made at not fitted

Horse Power 300

Horse Power as per Rule 74

ade for which vessel is intended Coastal Trade

M.V. "Van Gelder"

By whom built Ewald Berninghaus

By whom made N.V. Hock &amp; Fabrik "Bolnes"

By whom made

Owners Mrs. J. Hermans Schepwaart Breda

Is Refrigerating Machinery fitted for cargo purposes

Coastal Trade

Yard No. When built 1914

Engine No. 877 When made 1934

Boiler No. When made

Port belonging to Rotterdam

Is Electric Light fitted

Tons { Gross 325  
Net 230

## ENGINES, &amp;c.—Type of Engines

Bolnes Diesel Engine Type 4H52 2 or 4 stroke cycle 2 Single or double acting single

Minimum pressure in cylinders 37 kg/cm<sup>2</sup> Diameter of cylinders 260 mm Length of stroke 370 mm No. of cylinders 4 No. of cranks 4Indicated Pressure 4.6 kg/cm<sup>2</sup> Is there a bearing between each crank Yes

No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 230 mm 325 per beam

Revolutions per minute 325 Flywheel dia. 1200 mm Weight 1050 kg Means of ignition Compression Kind of fuel used Diesel oil

Crank shaft, { Solid forged as per Rule Crank pin dia. 140 mm Crank Webs Mid. length breadth 100 mm Thickness parallel to axis

{ Semi-built dia. of journals as fitted 140 mm accepted 117 mm Ser. cut. Mid. length thickness 75 mm Thickness around eyehole

All-built wheel Shaft, diameter as per Rule Intermediate Shafts, diameter as fitted Thrust Shaft, diameter at collars as per Rule as fitted 120 mm

Screw Shaft, diameter as per Rule as fitted 122 mm 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

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

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

Length of Bearing in Stern Bush next to and supporting propeller 500 mm

propeller, dia. 1400 mm Pitch No. of blades 4 Material Bronze whether Moveable Total Developed Surface sq. feet

Method of reversing Engines Clutch with reversing gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

Lubrication Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine above

Cooling Water Pumps, No. two Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Bilge Pumps worked from the Main Engines, No. one Diameter 74 mm Stroke 60 mm Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and Size One rotary How driven Belt driven by main engine or by auxiliary engine

Is the cooling water led to the bilges no 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 One rotary 350 mm Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size One rotary + one hand 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 302" In Pump Room

In Holds, &amp;c. 402"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one 22"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes 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 Yes

Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Locks

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes Are the Overboard Discharges above or below the deep water line above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers none 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 Yes

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 Yes Is the Shaft Tunnel watertight as tunnel 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 belt driven by

Auxiliary Air Compressors, No. one No. of stages one Diameters 101 mm Stroke 127 mm Driven by main and auxiliary engine

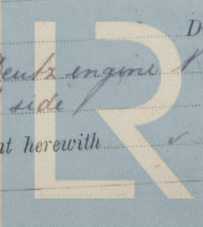
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

What provision is made for first Charging the Air Receivers Aux. air compressor Driven by

Scavenging Air Pumps, No. Diameter Stroke No. One cyl. Deutz engine 1246 cc

Auxiliary Engines crank shafts, diameter as per Rule as fitted 65 mm Position Starboard side

Have the Auxiliary Engines been constructed under special survey no G.H. Is a report sent herewith



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# AIR RECEIVERS:—Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes*

State No. of Report or Certificate

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. *two*

Total cubic capacity *272 h*

Internal diameter *302 mm*

thickness *9 mm*

by Rules *✓*

Seamless, lap welded or riveted longitudinal joint *Seamless*

Material *Steel*

Range of tensile strength *✓*

Working pressure *✓*

Actual *30 kg/cm<sup>2</sup>*

## IS A DONKEY BOILER FITTED?

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

If so, is a report now forwarded? *✓*

PLANS. Are approved plans forwarded herewith for Shafting *Approved 12-3-46*

Receivers *12-3-46*

Separate Fuel Tanks *✓*

Donkey Boilers *✓*

General Pumping Arrangements *14-3-46*

Pumping Arrangements in Machinery Space *14-3-46*

Oil Fuel Burning Arrangements *✓*

## SPARE GEAR.

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

State the principal additional spare gear supplied *One piston, one cylinder head, one fuel pump, bronze propeller*

*Set of piston rings*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
During progress of work in shops--  
During erection on board vessel--  
Total No. of visits *15*

Dates of Examination of principal parts—Cylinders *5-3-46* Covers *5-3-46* Pistons *24-4-46* Rods *24-4-46* Connecting rods *✓*

Crank shaft *15-3-46* Flywheel shaft *✓* Thrust shaft *15-3-46* Intermediate shafts *✓* Tube shaft *✓*

Screw shaft *12-3-46* Propeller *12-3-46* Stern tube *12-3-46* Engine sealings *7-5-46* Engines holding down bolts *7-5-46*

Completion of fitting sea connections *12-3-46* Completion of pumping arrangements *4-4-46* Engines tried under working conditions *10-5-46*

Crank shaft, Material *✓* Identification Mark *G.L.* Flywheel shaft, Material *✓* Identification Mark *G.L.*

Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *✓* Identification Marks *✓*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *✓* Identification Mark *G.L.*

Identification Marks on Air Receivers *G.L.*

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

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 *No*

Is this machinery duplicate of a previous case *No* If so, state name of vessel *No*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been built under the Germ. Lloyd's supervision and rules. The main and aux. machinery have now been completely opened up, air receivers tested hydraulically, screwshaft drawn, and all exam'd and made in good condition and have been afterwards tried under full working conditions and was found in good working and manouring order. (Please see Survey report.)*

*The vessels machinery being in a good condition, I am of opinion that the vessel is eligible to be classed in the Society's Registerbook L.M.C. 5-46 and notation T.S. seen 3-46.*

The amount of Entry Fee .. £ *140.00* When applied for, *19*  
Special ... .. £ : : When received, *19*  
Donkey Boiler Fee ... .. £ : :  
Travelling Expenses (if any) £ *3.50*

Committee's Minute

Assigned *L.M.C. 5.46 Oil Eng.*  
*S.3.46*

*A. Hassell*  
Engineer Surveyor to Lloyd's Register of Shipping.



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