

REPORT ON OIL ENGINE MACHINERY.

Received at London Office

20 AUG 1947

Date of writing Report **9-8-1947**. When handed in at Local Office **19** Port of **GRONINGEN**.

No. in Survey held at **Delfzijl** Date, First Survey **23-6-39** Last Survey **1-8-1947**.
Reg. Book. Number of Visits **65**

on the ~~Triple~~ ^{Single} Screw vessel **"BATAVIER"** Tons ^{Gross} **394.96**
~~Triple~~ ^{Single} ~~Quadruple~~ ^{Net} **147.58**

Built at **Delfzijl** By whom built **Schw. Gebr. Niestern** Yard No. **226** When built **1941**

Engines made at **Augsburg** By whom made **Messrs. M.A.N.** Engine No. **511640** When made **1939**

Donkey Boilers made at **-** By whom made **-** Boiler No. **-** When made **-**

Brake Horse Power **500** Owners **Mr. J. Muthert** Port belonging to **Groningen**

Nom. Horse Power as per Rule **97.8** Is Refrigerating Machinery fitted for cargo purposes **no.** Is Electric Light fitted **yes**

Trade for which vessel is intended **MN=105 sea going trade.**

OIL ENGINES, &c.—Type of Engines **oil engine 8 Vn 42.** 2 or 4 stroke cycle **4** Single or double acting **single**

Maximum pressure in cylinders **50 Kg/cm²** Diameter of cylinders **11 1/4" 285 mm** Length of stroke **16 1/2" 420** No. of cylinders **8** No. of cranks **8**

Mean Indicated Pressure **6.8 Kg/cm²** Span of bearings, adjacent to the crank, measured from inner edge to inner edge **340 mm. (352)** Is there a bearing between each crank **yes**

Revolutions per minute **375 300 aff²** Flywheel dia. **1200 mm** Weight **800 Kg.** Means of ignition **dir. ign.** Kind of fuel used **gas oil**

Crank Shaft, ^{Solid forged} ~~Semi built~~ ~~All built~~ dia. of journals as per Rule **-** as fitted **185 mm** Crank pin dia. **175 mm** Crank webs Mid. length breadth **280** Thickness parallel to axis **-**

Flywheel Shaft, diameter as per Rule **-** as fitted **-** Intermediate Shafts, diameter as per Rule **-** as fitted **140 mm** Thrust Shaft, diameter at collars as fitted **160 mm** as per Rule **-**

Tube Shaft, diameter as per Rule **-** as fitted **-** Screw Shaft, diameter as per Rule **-** as fitted **140 mm** Is the ~~tube~~ ^{screw} shaft fitted with a continuous liner **no.**

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 **yes**

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 tube shaft **yes** If so, state type **rubber ring** Length of bearing in Stern Bush next to and supporting propeller **600 mm**

Propeller, dia. **1700 mm** Pitch **1090 mm** No. of blades **4** Material **cast iron** whether moveable **no.** Total developed surface **50 %** sq. feet

Method of reversing Engines **direct by compr. air.** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **yes** Means of lubrication **forced** Thickness of cylinder liners **20 mm** Are the cylinders fitted with safety valves **yes** Are the exhaust pipes and silencers water cooled **yes**

~~lugged 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 **funnel** Cooling Water Pumps, No. **2** 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. **1** Diameter **105 mm** Stroke **120 mm** Can one be overhauled while the other is at work **yes**

Pumps connected to the Main Bilge Line (No. and size **1 Rotary 2 3/8" of 15 tons/h, 1 Rotary 3" of 60 tons/h, 1 Rotary 3" of 30 tons/h.** How driven **1 attached to main motor, 2 by main and aux. oil 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 60 M³/h** Power Driven Lubricating Oil Pumps, including spare pump, No. and size **2 à 2.29 M³/h.**

Are two independent means arranged for circulating water through the Oil Cooler **yes** Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size:—In machinery spaces **2 à 3" , 1 à 2 1/2" and 1 à 2 3/8"** In pump room **-**

In holds, &c. **4 à 2 1/2"** Independent Power Pump Direct Suctions to the engine room bilges, No. and size **2 of 3" (2 3/4" aff²)**

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes **yes** Are the bilge suction pipes 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 **bolted on riveted houses.** Are they fitted with valves or cocks **valves** Are they fixed efficiently 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 **-**

Do all pipes pass through the bunkers **none** How are they protected **-**

Do all pipes pass through the deep tanks **none** 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 **no tunnel** 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. **1** No. of stages **2** diameters **80/70 mm** stroke **80 mm** driven by **Main engine**

Small Auxiliary Air Compressors, No. **1** No. of stages **2** diameters **110/90 mm** stroke **85 mm.** driven by **aux. or main eng.**

Is any provision made for first charging the air receivers **small aux. air compr. driven by aux. motor, which is handstarted.**

Refrigerating Air Pumps, No. **-** diameter **-** stroke **-** driven by **-**

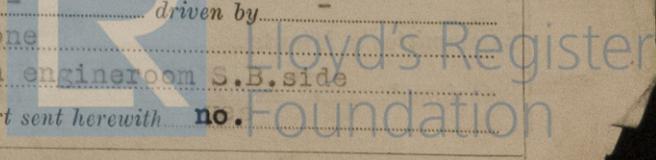
Auxiliary Engines crank shafts, diameter as per Rule **-** as fitted **48 mm** No. **one** Position **in engine room S.B. side**

Have the auxiliary engines been constructed under special survey **yes** Is a report sent herewith **no.**

18/9/47

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0500-110110-1100110



AIR RECEIVERS:—Have they been made under survey... yes... State No. of report or certificate Dusseldorf 30-5-39
 Order No. 20265
 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 800 litres Internal diameter 500 mm thickness 14 mm
 Seamless, lap welded or riveted longitudinal joint Lap. Material S.M. steel Range of tensile strength 39/41 Working pressure by Rules -...
 Actual 30 Atm.

IS A DONKEY BOILER FITTED no. 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... 3-8-39 Receivers 17-5-39 Separate fuel tanks 21-12-
 (If not, state date of approval)
 Donkey boilers -... General pumping arrangements 4-10-39 Pumping arrangements in machinery space 4-10-39
 Oil fuel buring 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,

Manufacturer.

Dates of Survey while building
 During progress of work in shops - 1939 June 23-27; July 10; Aug. 2-7-19-25-26; Sept. 4-8-15-18-14-20-23; Oct. 13-14-16-17-18-19-20-23-24-25-26-27-30-31; Nov. 1-2-3-6-7-8-9-13-14-15; Dec. 5-6-9-12-13-14-15-27; 1940 Jan. 12.
 During erection on board vessel - 28-7-39; 30-10-39; 25-4-40; 2-9-40; 24-1-41; 9-6-41; 7,8-5-46; 3-6-46; 30-9-46;
 14,21-2-47; 17-4-47; 9-6-47; 8,14-7-47; 1-8-47.
 Total No. of visits 65

Dates of examination of principal parts—Cylinders 19-9-39 Covers 27-6-39 Pistons 15-9-39 Rods -... Connecting rods 15-9-39
 Crank shaft 18-9-39 Flywheel shaft -... Thrust shaft 9-11-39 Intermediate shafts 12-1-40 Tube shaft -...
 Screw shaft 12-1-40 Propeller 14-7-47 Stern tube 21-2-47 Engine seatings 3-6-46 Engine holding down bolts 17-4-47
 Completion of fitting sea connections 12-3-40 Completion of pumping arrangements 8-7-47 Engines tried under working conditions 1-8-47
 Crank shaft, material S.M. steel Identification mark Lloyd's No. 2762 Flywheel shaft, material -... Identification mark -...
 Thrust shaft, material S.M. steel Identification mark Lloyd's No. 2118 Intermediate shafts, material S.M. steel Identification marks V.S. 12-1-40
 Tube shaft, material -... Identification mark -... Screw shaft, material S.M. steel Identification mark Lloyd's No. 283
 Identification marks on air receivers 2000 2003
60 Atm. W.P. 30 Atm. 60 Atm. W.P. 30 Atm.
V.S. 27-5-39. V.S. 27-5-39.

Is the flash point of the oil to be used over 150°F... yes
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with... yes
 Description of fire extinguishing apparatus fitted 4 x 5 litres A solvent of Sulphuric acid and Ammonium Bicarbonate in water.
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo... no. 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... not required.
 Is this machinery duplicate of a previous case... no. If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery has been fitted in accordance with the approved plans.
 Machinery examined during trial, found working satisfactory. Torsional vibration characteristics not submitted as this installation was fitted in 1941.
 We are of opinion that the machinery of this vessel is eligible for notation *LMC 8-47. Oil Engine and O.G. 8-47.

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

The amount of Entry Fee ... £ :
 Special ... £1. 100.-- : When applied for 1-12- 19 41.
 Donkey Boiler Fee... £ : When received 21-12- 19 41.
 Travelling Expenses (if any) £1. 29.-- :

W. Stone
 Engineer Surveyor to Lloyd's Register of Shipping.

 Lloyd's Register Foundation

Committee's Minute FRI. 19 SEP 1947
 Assigned + LMC 8.47 Oil Eng.
O.G. 8.47