

REPORT ON OIL ENGINE MACHINERY.

Received at London Office

Date of writing Report 13th Jan 40 When handed in at Local Office 19 Port of Bremen
 No. in Survey held at Orugsberg Date, First Survey 23rd June 39 Last Survey 12th Jan 1940
 Reg. Book. Number of Visits 48

on the Single } Screw vessel M.V. BATAVIER Tons { Gross 394.96
Twin } Net 147.58
Triple }
Quadruple }
 Built at Delfzijl By whom built Messrs Gebr. Niestorn & Co Yard No. 511640 When built 1939/40
 Engines made at Orugsberg By whom made Messrs. M. A. U. Engine No. (When made 1939)
 Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
 Brake Horse Power 500 Owners Messrs. Kap. Mutter Port belonging to Delfzijl
 Nom. Horse Power as per Rule 97.8 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓
 Trade for which vessel is intended ✓

OIL ENGINES, &c.—Type of Engines G 8 Vn 42 2 or 4 stroke cycle 4 Single or double acting single
 Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 285 mm Length of stroke 420 mm No. of cylinders 8 No. of cranks 8
 Mean Indicated Pressure 6.8 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 352 mm Is there a bearing between each crank yes
 Revolutions per minute 375 Flywheel dia. 1200 mm Weight 800 kg Means of ignition dis. ign. Kind of fuel used gas oil on test bed.
 Crank Shaft, { Solid forged dia. of journals as per Rule 185 mm Crank pin dia. 175 mm Crank Webs Mid. length breadth 280 mm Thickness parallel to axis ✓
 { Semi built dia. of journals as fitted 185 mm Mid. length thickness 89.5 mm shrunk Thickness around eye-hole ✓
 { All built }
 Flywheel Shaft, diameter as per Rule ✓ Intermediate Shafts, diameter as per Rule ✓ Thrust Shaft, diameter at collars as per Rule ✓
 as fitted ✓ as fitted ✓ as fitted ✓
 Tube Shaft, diameter as per Rule ✓ Screw Shaft, diameter as per Rule ✓ Is the { lube } shaft fitted with a continuous liner { ✓
 as fitted ✓ as fitted ✓ screw }
 Bronze Liners, thickness in way of bushes as per Rule ✓ Thickness between bushes as per Rule ✓ Is the after end of the liner made watertight in the
 as fitted ✓ as fitted ✓ 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 310/47
 Method of reversing Engines by compr. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication
press Thickness of cylinder liners 20 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with
 non-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 ✓
 Cooling Water Pumps, No. 1; 15.0 m³/h Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓
 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 ✓
 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 ✓ Main engine Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1; 2.29 m³/h
 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. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓
 Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 80/70 mm Stroke 80 mm Driven by Main engine
 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 ✓ No. ✓
 as fitted ✓ Position ✓
 Have the Auxiliary Engines been constructed under special survey ✓ Is a report sent herewith ✓



1500-410410-400410

AIR RECEIVERS:—Have they been made under survey Are reports or certificates now forwarded
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule
 Can the internal surfaces of the receivers be examined and cleaned Is a drain fitted at the lowest part of each receiver
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. Total cubic capacity Internal diameter thickness
 Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure Actual

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 ^{crank}Shafting 1416 Febr. 1938 Receivers 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 as per Rules.

Note. This engine was previously ordered for Messrs. Kiangnan Dock Co, Shanghai, under the work No 511640. This order has been cancelled by the contractor, and the engine now is destined for Messrs. Gebr. Niester + Co. Delft?

The foregoing is a correct description.
Maschinenfabrik Augsburg-Nürnberg A.G.
H. Müller W. H. Hoffmann

Manufacturer.

Dates of Survey while building
 During progress of work in shops-- 1938: June 23, 27, July 10, Aug. 2, 21, 19, 25, 26, Sept 4, 8, 15, 18, 19, 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.
 During erection on board vessel-- 1940: Jan. 12.
 Total No. of visits 48.

Dates of Examination of principal parts—Cylinders 14. 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 Intermediate shafts Tube shaft
 Screw shaft Propeller Stern tube Engine sealings 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 2762. N.S.A. 426 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

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 Standard Type of heavy oil engines of the makers.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This heavy oil main engine has been constructed under special survey in accordance with the Society's Rules and Regulations, as well as with the approved plans and instructions hereto. The material used in the construction is good, and the workmanship satisfactory. This main engine has been tested on the makers' test bed during several hours, running under full load, 10% overload, and part-loads in the presence of the undersigned, and was found to be in safe working condition during these trials. After the trials the engine has been opened up for inspection, and all parts were found in order.

In an 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.

The amount of Entry Fee ..	Pin 40:00	When applied for,
Special ...	£ 490:00	24. 1. 1940
1 x Post Paid Trial Donkey Boiler Fee ...	£ 63:00	When received,
Travelling Expenses (if any) £	57:00	29. 2. 1940

W. H. Hoffmann
 Engineer Surveyor to Lloyd's Register of Shipping.

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

Committee's Minute

Assigned

