

Rpt. 4b.

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REPORT ON OIL ENGINE MACHINERY.

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Date of writing Report 5.8. 1938 When handed in at Local Office 12.8. 1938 Port of Dusseldorf
No. in Survey held at Cologne Date, First Survey 20.1.38. Last Survey 4.8.38 19
Reg. Book. Number of Visits 13

on the ^{Single} ^{Twin} ^{Triple} ^{Quadruple} } Screw vessel motor tanker "B.P. SPIRIT" Tons } Gross
Built at Kinderdyk By whom built L. Smit & Zoon Yard No. 892 When built 1938
Engines made at Cologne By whom made Humboldt-Deutzmotoren A.G. Engine No. When made 1938
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power 440 Owners Union Lightering Comp. Ltd. Port belonging to London
Nom. Horse Power as per Rule 94 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes
Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Heavy oil engine RV8M 345 2 or 4 stroke cycle 4 Single or double acting single
Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 280 mm Length of stroke 450 mm No. of cylinders 8 No. of cranks 8
Mean Indicated Pressure 6,6 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 307,5 mm Is there a bearing between each crank yes
Revolutions per minute 330 Flywheel dia. 1250 mm Weight 2600 kg Means of ignition sol. inject Kind of fuel used on test bed gas oil
Crank Shaft, { Solid forged dia. of journals as per Rule 190 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 340 mm Thickness parallel to axis
{ Semi built as fitted All built Mid. length thickness 70 mm shrunk Thickness around eyehole
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 190 mm Thrust Shaft, diameter at collars as per Rule
as fitted Tube Shaft, diameter as per Rule Screw Shaft, diameter as fitted 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
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
Method of reversing Engines directly by hand Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication
forced Thickness of cylinder liners 25mm Are the cylinders fitted with safety valves yes Are the exhaust pipes water cooled or lagged with
non-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

Cooling Water Pumps, No. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Bilge Pumps worked from the Main Engines, No. one Diameter 100mm Stroke 100mm Can be overhauled while 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 Main engine capacity 80 ltrs/min at 1400 r.p.m.

Ballast Pumps, No. and size Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 tooth wheel pump
two stages
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-bozes 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. one No. of stages two Diameters 145/60mm Stroke 100 mm Driven by main engine
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by
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 as fitted No. Position
Have 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 State No. of Report or Certificate attached to the copy of this report sent to Rotterdam Office
 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. xxxx Cubic capacity of each 2x500x11x Internal diameter thickness
 Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual
Starting Air Receivers, No. two Total cubic capacity 2x500 lts. 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/mm² Working pressure by Rules Actual 30 kg/cm²

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 212480 1.9.36 Receivers G.O. 244 21.7.38 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 foregoing is a correct description,
Humboldt-Deutzmotoren
 Aktiengesellschaft Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 20.1.- 11.5.- 24.5.- 7.6.- 11.6.- 14.6.- 21.6.- 9.7.- 13.7.- 14.7.- 19.7.- 3.8.
 { During erection on board vessel -- } 4.8.38.
 Total No. of visits
 Dates of Examination of principal parts—Cylinders 19.7. 4.8. Covers 21.6. 4.8. Pistons 4.8. Rods Connecting rods 11.5. 24. 4.8.
 Crank shaft 14.6. 19.7. Flywheel shaft Thrust shaft Intermediate shafts 20.1. 4.8. 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 3.8.38. on test
 Crank shaft, Material S.M. Steel Identification/Mark LLOYD'S 13897 M.B. 14.6.38 Flywheel shaft, Material Identification Mark
 Thrust shaft, Material Identification Mark Intermediate shafts, Material S.M. Steel Identification Marks LLOYD'S 3462 H.B. 4.
 Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark
 Identification Marks on Air Receivers No. 2309 + 1520 LLOYD'S TEST 60 Atm. W.P. 30 Atm. L.S.7.6.38 H.K.11.6.38.

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 Messrs. My De Noord Yard No. 559 Dusseldorf 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 thereto.
 The material used in the construction is good and the workmanship is satisfactory. The engine has been tested on the Maker's 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 the 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 sent to Rotterdam Office.
 The amount of Entry Fee RM. 40.- When applied for, Dusseldorf 15.8.1938 RM 470 paid as per Secretary's letter 11/6/38
 Special RM. 470.-
 Donkey Boiler Fee When received,
 Travelling Expenses (if any) RM. 60.- 14/9 1938 1/3 of the fees to be credited to Rotterdam A/c
 Engineer Surveyor to Lloyd's Register of Shipping,

Committee's Minute TUE. 14 MAR 1939
 Assigned See FE, machy roll
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Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)