

Rpt. 4b.

HD No. 20917007
LR 84

REPORT ON OIL ENGINE MACHINERY.

No. 68

27 JUL 1953

Received at London Office

Date of writing Report 8.6. 19 53 When handed in at Local Office 19 Port of Düsseldorf
No. in Survey held at Köln-Deutz Date, First Survey 21.2.1953 Last Survey 18.5. 19 53
Reg. Book. Single on the Twin Triple Quadruple Screw vessel M.V. LISBETH M.
Built at Heusden By whom built De Haan & Oerlemans Scheepswerven Yard No. 274 When built 1488053-58
Engines made at Köln-Deutz By whom made Klöckner-Humboldt-Deutz A.G. Engine No. 5.53
Donkey Boilers made at - By whom made - Boiler No. - When made -
Brake Horse Power 830 Owners. - Port belonging to -
M.N. Power as per Rule 166 Is Refrigerating Machinery fitted for cargo purposes. - Is Electric Light fitted. -
Trade for which vessel is intended. -

OIL ENGINES, &c. — Type of Engines Airless Injection Heavy Oil, Type RV6M 366 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 60 kg/cm² Diameter of cylinders 420 mm Length of stroke 660 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 6.55 kg/cm² Ahead Firing Order in Cylinders 1.2.3.6.5.4. Span of bearings, adjacent to the crank, measured from inner edge to inner edge 509.5 mm Is there a bearing between each crank yes Revolutions per minute 250

Flywheel dia. 1600 mm Weight 6.300 kg Moment of inertia of flywheel (lbs. in² or Kg cm²) 10000 Means of ignition forced Kind of fuel used Diesel

Crank Shaft, (Solid forged dia. of journals as fitted 270 mm Crank pin dia. 260 mm Crank webs Mid. length breadth 460 mm Thickness parallel to axis -
Semi built dia. of journals as fitted 270 mm Crank webs Mid. length thickness 122 mm shrunk Thickness around eyehole -
All built as per Rule - as fitted 20.4.51

Flywheel Shaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule - Thrust Shaft, diameter at collars as fitted -
as fitted - as fitted 260 mm as per Rule -

Tube Shaft, diameter as per Rule - Screw Shaft, diameter as per Rule - Is the (tube screw) shaft fitted with a continuous liner (-
as fitted - as fitted -

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 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 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

Moment of inertia of propeller (lbs. in² or Kg cm²) - Kind of damper, if fitted vibration damper

Method of reversing Engines with 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 35 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 -

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 200 mm Stroke 120 mm Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line (No. and size No other information than above 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 - Power Driven Lubricating Oil Pumps, including spare pump, No. and size One driven by main engine capacity 165/150 ltrs/min

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 - 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 suction 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. one on Main Engine No. of stages two diameters 180/65 mm stroke 120 mm driven by Main engine

Auxiliary Air Compressors, No. - No. of stages - diameters - stroke - driven by -

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 - No. - Position -
as fitted -
Have the auxiliary engines been constructed under special survey - Is a report sent herewith Main engine only supplied

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AIR RECEIVERS:—Have they been made under survey... yes State No. of report or certificate Df. D. Nos. 7651; 7652
Is each receiver, which can be isolated, fitted with a safety valve as per Rule. — 7654; 7656; 7657.
Can the internal surfaces of the receivers be examined and cleaned... yes Is a drain fitted at the lowest part of each receiver. —
Injection Air Receivers, No. — Cubic capacity of each. — Internal diameter. — thickness. —
Seamless, welded or riveted longitudinal joint. — Material. — Range of tensile strength. — Working pressure by Rules. —
Starting Air Receivers, ~~NINE~~ Five Total cubic capacity 2500 m³ Internal diameter 460 mm thickness 10 mm
Seamless, welded or riveted longitudinal joint welded Material SM Steel Range of tensile strength 47/53 kg/mm² Working pressure by Rules 30 kg/cm² 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. — Receivers appr. -13.1.50 Separate fuel tanks appr. —
(If not, state date of approval)

Donkey boilers. — General pumping arrangements. — Pumping arrangements in machinery space. —
Oil fuel burning arrangements. —
Have Torsional Vibration characteristics been approved submitted to London for approval Date of approval 12/3/53 ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied. as per Rule.
State the principal additional spare gear supplied.

Klöckner-Wulboldt-Deutz
Aktiengesellschaft

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops 21.2; 6.3.; 13.3; 16.3; 23.3; 24.3; 30.3; 24.4; 28.4; 4.5; 6.5; 18.5.53
During erection on board vessel. —
Total No. of visits 12
Dates of examination of principal parts—Cylinders 16.3; 23.3. Covers 24.3.53 53
Crank shaft 21.2; 16.3; 6.5.53 Flywheel shaft. — Thrust shaft. — Intermediate shafts 4.5.53 Tube shaft. —
Screw shaft. — Propeller. — Stern tube. — Engine seatings. — Engine holding down bolts. —
Completion of fitting sea connections. — Completion of pumping arrangements. — Engines tried under working conditions 28.4; 6.5.53
Crank shaft, material SM Steel mm² LLOYD'S 129 Identification mark HB 16.3.53 Flywheel shaft, material. — Identification mark. —
Thrust shaft, material. — Identification mark. — Intermediate shafts, material SM Steel mm² LLOYD'S 24 Identification marks HD 28.2.53
Tube shaft, material. — Identification mark. — Screw shaft, material. — Identification mark. —
Identification marks on air receivers LLOYD'S TEST TP 60 Atm. WP 30 Atm. R 8249, R 8250, R 8252, R 8254, R 8255
K.M. 21.4.53 K.M.

Welded receivers, state Makers' Nama Ruhrstahl A.G. Brackwede

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. —

Description of fire extinguishing apparatus fitted. —

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 Scheepswerf E.I. Smit & Zoon Westbroek, Yard No. 1160

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.)
This engine has been constructed under special survey of tested materials and is in accordance with the Secretary's letters, approved plans, and Rule requirements. The materials and workmanship are good and the engine when tested in the shops under full and overload conditions was found to function satisfactorily. The governor tests were also satisfactory.

This engine is suitable in my opinion, for main propelling purpose and when satisfactorily installed and reported will be eligible to receive the notation



LMC (with date)

The amount of Entry Fee ... £ DM : 900,-

Special ... £ : When applied for 22.7.53 19

Running Test Donkey Boiler Fee... £ DM : 100,- When received 19

Travelling Expenses (if any) £ DM : 90,-

Committee's Minute TUESDAY 19 JULY 1954

Assigned See Rpt. 48.

Engineer Surveyor to Lloyd's Register of Shipping.



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