

REPORT ON OIL ENGINE MACHINERY.

No. 1152

Received at London Office 12.11.54

Date of writing Report 13th Oct. 19 54 When handed in at Local Office 13th Oct. 19 54 Port of KIEL

No. in Survey held at KIEL Date, First Survey 17th August Last Survey 7th October, 19 54
Reg. Book. " DROR " Number of Visits 3

Single on the Twin Triple Quadruple Screw vessel. Tons Gross Net.

Built at Walsum By whom built Rheinwerft Walsum Yard No. 928 When built

Engines made at Kiel-Friedrichsort By whom made MAK Maschinenbau Kiel Aktiengesellschaft Engine No. 14487 When made 1954

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

Brake Horse Power { Maximum - Service 240 Owners - Port belonging to -

M.N. as per Rule - Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

Trade for which vessel is intended trawling service

OIL ENGINES, &c. - Type of Engines MS 36 2 or 4 stroke cycle 4 Single or double acting S.A.

Maximum pressure in cylinders 46 kg/cm² Diameter of cylinders 215 mm Length of stroke 360 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 6.6 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in

way of a crank) 242 mm Is there a bearing between each crank yes Revolutions per minute { Maximum - Service 500

Flywheel dia. 970 mm Weight 1265 kg Moment of inertia of flywheel (Horsepower Kg/m²) 69000 Means of ignition compr. Kind of fuel used Diesel

" " " " balance wts. (" " " ")

Crank Shaft, Solid forged dia. of journals as per Rule - as fitted 135 mm Crank pin dia. 135 mm Crank webs Mid. length breadth 200 mm Mid. length thickness 62 mm Thickness parallel to axis - Thickness around eye-hole -

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

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

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. - 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 fitted at the after

end of stern tube. - 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 including entrained water (lbs. in² or Kg. cm²) - Kind of damper, if fitted friction

Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine yes Means of

lubrication forced Thickness of cylinder liners 1.5 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes

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. and how driven one - M.E. Working F.W. -

S.W. - Spare F.W. - S.W. - Is the sea suction provided with an efficient strainer which can be cleared within the vessel. -

Bilge Pumps worked from the Main Engines, No. and capacity - Can one be overhauled while the other is at work. -

Pumps connected to the Main Bilge Line { No. and capacity of each one - 8 m³/hr. 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 capacity. - Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 at 38 ltr./min. 1 pressure-1 scavenge

Are two independent means arranged for circulating water through the Oil Cooler. - Branch Bilge Suctions. -

No. and size: - In machinery spaces. - In pump room. -

In holds, &c. -

Direct Bilge 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 No. of stages 2 diameters 108/120 stroke 70 mm driven by M.E.

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

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

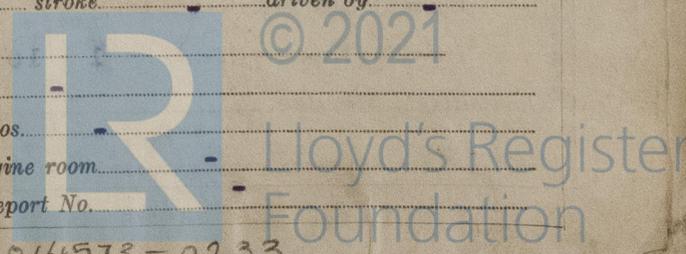
What provision is made for first charging the air receivers. -

Scavenging Air Pumps or Blowers, No. - How driven. -

Auxiliary Engines Have they been made under survey. - Engine Nos. -

Makers name - Position of each in engine room. -

Report No. -



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AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....

State full details of safety devices.....

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, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

Starting Air Receivers, No..... Total cubic capacity..... Internal diameter..... thickness.....

Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

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..... 5.2.53..... Receivers..... Separate fuel tanks.....

Donkey boilers..... General pumping arrangements..... Pumping arrangements in machinery space.....

Oil fuel burning arrangements.....

Have Torsional Vibration characteristics been approved..... no..... Date and particulars of approval..... will be submitted

SPARE GEAR.

Has the spare gear required by the Rules been supplied..... State if for "short voyages" only.....

State the principal additional spare gear supplied.....

The foregoing is a correct description, and the particulars of the engine are as submitted for and the torsional vibration characteristics. Manufacturer.

Dates of Survey while building: During progress of work in shops - 1954: AUG.: 17, Sept.: 7, Oct. 7, 18; During erection on board vessel - - - - -; Total No. of visits 3

Dates of examination of principal parts: Cylinders 17.8.54, Covers 17.8.54, Pistons 17.8.54, Rods 17x8x54, Connecting rods 17.8.54, Crank shaft 17.8.54, Flywheel shaft, Thrust shaft, Intermediate shafts, Tube shaft, Screw shaft, Propeller, Stern tube, Engine seatings, Engine holding down bolts 7.10.54

Completion of fitting sea connections, Completion of pumping arrangements, Engines tried under working conditions 7.10.54; Crank shaft, material SM steel, Identification mark LLOYD'S DSF 0461 HS 25.5.54; 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

Identification marks on cylinder block: LLOYD'S TEST KEL No. 1524 10 ATM 17.8.54 NC; Welded receivers, state Makers' Name -

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.....

Full description of fire extinguishing apparatus fitted in machinery spaces.....

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.....

What is the special notation desired.....

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..... If so, state name of vessel.....

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

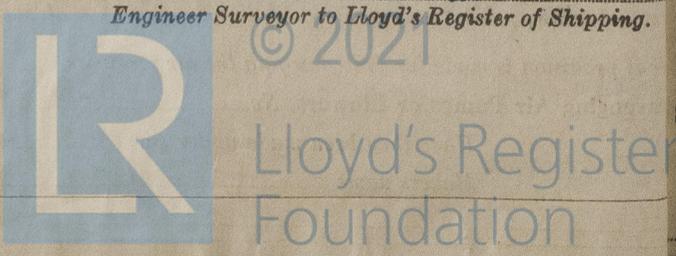
This engine has been built under Special Survey in accordance with the Secretary's letters, approved plan and the Rules. The materials and workmanship are good, and when examined on the test bed with full load the engine was found in order. The engine is eligible, in my opinion, for installation in a classed vessel with notation of + LMC, subject to the T.V.C.s being found in order.

M&K Maschinenbau Kiel Aktiengesellschaft; i. Hind. E.V.

The amount of Entry Fee ... £ 33 : 15 0; Special ... £ : ; Donkey Boiler Fee... £ : ; Travelling Expenses (if any) £ 1 : 10 0

When applied for A/o rendered from London 12.11.54; When received 19

N. Chambers Engineer Surveyor to Lloyd's Register of Shipping.



Certificates (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 Sec. Rpt. 46

FRIDAY - 3 JUN 1955