

REPORT ON OIL ENGINE MACHINERY.

Received at London Office 17 FEB 1956

Date of writing Report 4th Feb. 1956 When handed in at Local Office 4th Feb. 1956 Port of KIEL

No. in Survey held at KIEL Date, First Survey 7th December 1955 Last Survey 9th January 1956
Reg. Book. Number of Visits 4

Single on the Twin Triple Quadruple Screw vessel M.V. "SAN FLORA" Tons Gross Net

Built at Santander By whom built Messrs. Corjo Hijos Yard No. 65 When built

Engines made at Kiel-Friedrichsort By whom made Messrs. MAK Maschinenbau Kiel Engine No. 10648 When made 1956
Aktiengesellschaft

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

Brake Horse Power { Maximum Service 1150 Owners. Port belonging to

M.N. as per Rule 230 Is Refrigerating Machinery fitted for cargo purposes. Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c. — Type of Engines heavy oil — MAK type MSu 582 A 2 or 4 stroke cycle 4 Single or double acting S.A.

Maximum pressure in cylinders 55 kg/cm² Diameter of cylinders 385 mm Length of stroke 580 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 10,2 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 483 mm

Is there a bearing between each crank yes Revolutions per minute { Maximum Service 300

Flywheel dia 1740 mm Weight 4600 kg Moment of inertia of flywheel (lbs. in² or Kg. m²) 8856 Means of ignition compr. Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals as per Rule 245 mm Crank pin dia 240 mm Crank webs Mid. length breadth 360 mm Thickness parallel to axis

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

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 fitted at the after end of stern tube

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 30 mm

Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled back to the engine

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 one - 43 m³/hr. Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and capacity of each 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 two - 300 ltrs./min.

Are two independent means arranged for circulating water through the Oil Cooler Branch Bilge Suctions In pump room

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 two diameters 120(120-108) 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

Supercharge Blowers, No. one VTR 320/120 How driven exhaust gas Engine Nos.

Auxiliary Engines Have they been made under survey Position of each in engine room

Makers name Report No.



01421-01426-0081

4B. 1476.

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

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

Oil fuel burning arrangements.....

Have Torsional Vibration characteristics been approved yes Date and particulars of approval 12.1.1956

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,

M&K
Maschinenbau Kiel
Aktiengesellschaft
Manufacturer G. W. Nagel

Dates of Survey while building { During progress of work in shops - - 1955: Dec.: 7, 10, 19, 1956: Jan.: 9th

{ During erection on board vessel - - -

Total No. of visits 4 7.12.55

Dates of examination of principal parts—Cylinders 10.12.55 Covers 10.12.55 Pistons 10.12.55 Rods..... Connecting rods 10.12.55

Crank shaft 7.12.55 Flywheel shaft..... Thrust shaft..... Intermediate shafts..... 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 9.1.56

Crank shaft, material SM steel Identification mark LLOYD'S DTM 279 HAB 9.7.55 Flywheel shaft, material..... Identification mark.....

Thrust shaft, material..... Identification mark 930 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. 1550
10 ATM
ES 10.12.55 ES

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 Rules and approved plans. The material and workmanship are good, and when examined on the test bed under full load, the engine was found in order. The engine is eligible, in my opinion, for installation in a vessel with the notation of + LMC, subject to torsional records being taken on the completed installation and found in order.

C.S.E.D.?

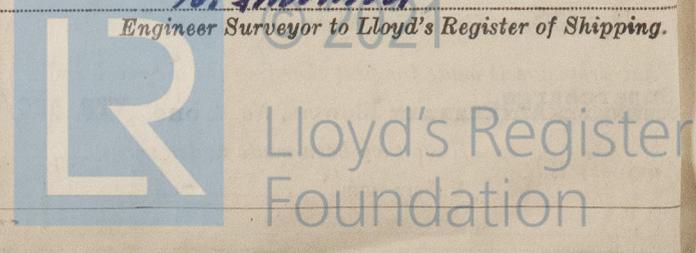
The amount of Entry Fee ... £ 94, 0, 0 }
Special ... £ : : }
Donkey Boiler Fee... £ : : }
Travelling Expenses (if any) £ 2, 0, 0 }
When applied for 19
When received 19

A/c rendered from London 22/2

G. Chamber
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRIDAY - 7 SEP 1956

Assigned See Rpt. 4 c.



The Surveyors are requested not to write on or below the space for Committee's Minute.