

REPORT ON OIL ENGINE MACHINERY.

No. 17770.



Received at London Office

12 OCT 1950

Date of writing Report 4th October 1950. When handed in at Local Office 7th October 1950. Port of Gothenburg.

To in Survey held at Kristinehamn Date, First Survey 3rd November, 1949 Last Survey 26th September 1950.

Leg. Book. Single on the ~~XXXX~~ Screw vessel "S L I E D R E C H T" Approximate Tons Gross 10500 Net 10500

Built at Gothenburg By whom built A-B. Lindholmens Varv Yard No. 1013 When built 1950

Engines made at Kristinehamn By whom made A-B. Karlstads Mek. Verkstad Engine No. 17 When made 1950

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

Indicated Horse Power 5950 Owners Phs. van Ommereen N.V. Port belonging to Rotterdam

I.N. Power as per Rule 1263 Is Refrigerating Machinery fitted for cargo purposes --- Is Electric Light fitted ---

Trade for which vessel is intended International, Tanker.

ENGINES, &c. Type of Engines Heavy oil engine, solid injection, 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 52 kg/cm² Sulzer type. (28.11/32") 3/8 (49.7/32") 3/8 Diameter of cylinders 720 mm. Length of stroke 1250 mm No. of cylinders 9 No. of cranks 9

Mean Indicated Pressure 5.75 kg/cm² Ahead Firing Order in Cylinders 1-6-7-3-4-9-2-5-8 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 930 mm. Is there a bearing between each crank Yes Revolutions per minute 125

Flywheel dia. 2424 mm. Weight 1700 kgs Moment of inertia of flywheel (as per Rule) 5000 kgm² Means of ignition Compr. Kind of fuel used Diesel oil

Crank shaft, Semi built dia. of journals as fitted 490 mm. Crank pin dia. 490 mm. Crank webs Mid. length breadth 785 Thickness parallel to axis 306 mm. with 150 mm. central hole Mid. length thickness 295 shrunk Thickness around eye hole 243 mm.

Flywheel shaft, as per Rule --- Thrust Shaft, diameter at collars as fitted 490 mm. as fitted 490 mm.

Tube Shaft, diameter as per Rule --- Screw Shaft, diameter as per Rule --- Is the (tube) 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 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. cm.²) --- Kind of damper, if fitted ---

Method of reversing Engines Compr. 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 45 mm. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

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

Bilge Pumps worked from the Main Engines, No. --- Diameter --- Stroke --- 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 --- Power Driven Lubricating Oil Pumps, including spare pump, No. and size ---

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 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. --- No. of stages --- diameters --- stroke --- driven by ---

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. 9 D.A. (1 for each cyl.) diameter 950 mm. stroke 520 mm. driven by Main engine

Auxiliary Engines crank shafts, diameter as per Rule --- No. --- Position ---

Have the auxiliary engines been constructed under special survey. --- Is a report sent herewith. ---

27/10/50

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AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....
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, 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..... London 14.4.1949 Receivers..... Separate fuel tanks.....
(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..... Yes..... Date of approval..... London, 20.4.1949.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied..... To the Rule requirements.
State the principal additional spare gear supplied..... To be checked on board

The foregoing is a correct description, and the particulars of the installation as fitted are as approved for torsional vibration characteristics.

AKTIEBOLAGET KARLSTADS MEKANISKA VERKSTAD
DIESELMOTORAVDELNINGEN
KARLSTAD

Manufacturer.

Dates of Survey while building
During progress of work in shops..... 3rd November, 1949 - 26th September, 1950.
During erection on board vessel.....
Total No. of visits..... 2.

Dates of examination of principal parts—Cylinders 2-3.6.1950 Covers 16.8.1950 Pistons 25.11 & 1.12.1949 Rods..... Connecting rods 2.6.1950
Crank shaft 20.2.1950 Flywheel shaft..... Thrust shaft 20.2.1950 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 15.8.1950
Crank shaft, material S.M. Steel Identification mark..... Flywheel shaft, material..... Identification mark.....
Thrust shaft, material S.M. Steel Identification mark..... Intermediate shafts, material..... Identification marks.....
Tube shaft, material..... Identification mark..... Screw shaft, material..... Identification mark.....
Identification marks on air receivers.....

Welded receivers, state Makers' Name.....
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..... Not required
Is this machinery duplicate of a previous case..... No..... If so, state name of vessel.....

General Remarks (State quality of workmanship, opinions as to class, &c.)
This main engine has been constructed under special survey and to approved plans in accordance with the Rules. The materials were tested by the Society's Surveyors with satisfactory results, and the workmanship was found to be of good quality throughout. The engine was tested under working conditions and on completion partially dismantled and sent to the Shipbuilders for installation in the vessel.

It is recommended that this machinery be assigned the record of +LMC (with date), subject to this engine being installed on board and tested under working conditions, all to the satisfaction of the Society's Surveyors.

The amount of Entry Fee ... £ ... : ...
Special ... Kr. 3640:00 : When applied for 7th Octob. 19 50.
Donkey Boiler Fee... £ ... : ... : When received ... 19 ...
Travelling Expenses (if any) Kr. 98:65.

Committee's Minute

Assigned

Anders Sjögren
Engineer Surveyor to Lloyd's Register of Shipping



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Foundation