

# REPORT ON OIL ENGINE MACHINERY.

Received at London Office

2-SEP-1952

Date of writing Report 22 Aug. 1952 When handed in at Local Office 19 Port of AUGSBURG

Survey held at Augsburg Date, First Survey 27th August, 1951 Last Survey 2nd August, 1952  
Number of Visits

on the Twin Screw vessel M.V. "Mosk" Tons Gross Net

By whom built Deutsche Werft A.G. Yard No. 640 When built

Engines made at Augsburg By whom made Maschinenfabrik Augsburg-Nürnberg A.G. Engine No. 501528 When made 1951/52

Boiler No. When made

Owners Neptune Shipping Co. Ltda., Panama Port belonging to Panama

Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

IL ENGINES, &c. - Type of Engines M.A.N. Standard Type K10770/120A2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 50 atm. Diameter of cylinders 700 mm Length of stroke 1200 mm No. of cylinders 10 No. of cranks 10

Mean Indicated Pressure 6.25 atm. Span of bearings (i.e., distance between inner edges of bearings in

way of a crank) 1250 mm Is there a bearing between each crank yes Revolutions per minute Maximum Service 125

Flywheel dia. 2080 mm Weight 4050 kg Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 12200 kgm<sup>2</sup> Means of ignition dir. inj Kind of fuel used Diesel oil

Cranks balance wts. ( " " " " )

Crank Shaft dia. of journals as per Rule 465 mm Crank pin dia. 465 mm Crank webs Mid. length breadth 880 mm Thickness parallel to axis

Mid. length thickness 285 mm Thickness around eye-hole 205 mm

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. 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. in<sup>2</sup> or Kg. cm<sup>2</sup>) Kind of damper, if fitted

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

for lagged with non-conducting material lagged 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 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 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

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

BHP, 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

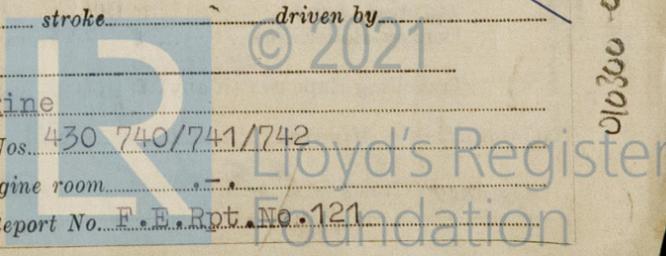
Scavenging Air Pumps or Blowers, No. 1 How driven by main engine Engine Nos. 430 740/741/742

Auxiliary Engines Have they been made under survey yes Makers name M.A.N. Position of each in engine room

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JM  
15/9/52

12200 kgm<sup>2</sup>



4<sup>13</sup> 140

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 appr. 4.6.51..... 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 to be forw. by Yard SPARE GEAR. Date and particulars of approval 10/12/51

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

Maschinenfabrik Augsburg-Munich, G. Manufacturer.

Dates of Survey while building  
During progress of work in shops - 1951: Aug., 27; Sept., 12.26; Oct., 8.10.12.31; Nov., 12.16.21.23.29; Dec., 15.17.2  
1952: Jan., 3.8.12.15.17.18.19.22.23.24.26.30; Febr., 5.6.8.19.20.22.26.28;  
During erection on board vessel - March, 1.5.6.7.11.14.13.15.19.20.24.25.27.29; April, 2.7.10.22.25.28.29.30;  
May, 5.7.8.10.21.23.27.28.31; June, 4.6.10.11.13.14.16.17.18.19.20.21.24.30;  
July, 3.4.9.10.11.12.16.18.23; Aug., 2.-  
Total No. of visits ninety

Dates of examination of principal parts - Cylinders 11.13.6.52 Covers 17.6.52 Pistons 6.11.18.6.52 Rods 19.20.6.52 Connecting rods 28.4.52  
Crank shaft 17.1.52 Flywheel shaft..... Thrust shaft see cranksh. 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.....

Crank shaft, material S.M. Steel Identification mark HK 181/928 17.1.52 Flywheel shaft, material..... Identification mark.....  
Thrust shaft, material see cranksh. Identification mark HK-877 Intermediate shafts, material..... Identification marks.....  
Tube shaft, material..... Identification mark 17.1.52 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.....

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

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

This heavy oil main engine has been constructed in accordance with the Rules and Regulations, the approved plans, the Secretary's letters and instructions thereto. The material used in the construction is good and the workmanship was found to be satisfactory. The engine has been tested running on Makers test bed under full-, over-, and partial loads with satisfactory results during several hours.

In our 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 satisfactorily fitted aboard the vessel and has been tried under full working conditions.

The amount of Entry Fee 605/1342 1014 3810.  
Welded steel plates 10M 484.  
Special ... £ 180.  
Test bed trial 10M 180.  
Donkey Boiler Fee... £ :  
Travelling Expenses (if any) £ 10M 96.  
10M 4570.-  
When applied for 19  
When received 19  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned See F.E. mch. rpt. Ham 2023  
FRI 24 OCT 1952  
Lloyd's Register Foundation

Certificate (if required) to be sent to  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)