

# REPORT ON OIL ENGINE MACHINERY.

No. 1008

14 OCT 1929

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Date of writing Report 19 \_\_\_\_\_ When handed in at Local Office 19 \_\_\_\_\_ Port of Bremen (Augsburg)  
 No. in Survey held at Augsburg Date, First Survey 3rd January Last Survey 31st Oct 1927  
 Reg. Book. \_\_\_\_\_ Number of Visits 99

on the Single Twin Triple Quadruple Screw vessel \_\_\_\_\_ Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_  
 built at Nicolaieff By whom built The Nicolaieff States Shipb Yard No. 185 When built \_\_\_\_\_  
bons "Andre Marti"  
 Engines made at Augsburg By whom made Masch. Augsburg Nurnbg A.G. Engine No. 26710/20 When made 1927  
 Donkey Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_  
 Brake Horse Power 2800 Owners The Russian Naphta Syndicate Port belonging to \_\_\_\_\_  
 Nom. Horse Power as per Rule 950 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_  
 Trade for which vessel is intended \_\_\_\_\_

**MAIN ENGINES, &c.** Type of Engines 2 M.A.N. Diesel engines 2 or 4 stroke cycle 2 Single or double acting single  
 Maximum pressure in cylinders 35 kg/cm<sup>2</sup> Diameter of cylinders 540 mm Length of stroke 900 mm No. of cylinders 12 (2x6) No. of cranks 2/2x6  
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 802 mm Is there a bearing between each crank yes  
 Revolutions per minute 110 Flywheel dia. 2100 mm Weight 6300 kg Means of ignition Diesel syst Kind of fuel used Gas oil  
 Crank Shaft, dia. of journals as per Rule 346 mm Crank pin dia. 360 mm Crank Webs Mid. length breadth semi built shrunk Thickness parallel to axis 365 mm  
 as fitted 360 mm Mid. length thickness 235 mm Thickness around eyehole 157.5 mm  
 Flywheel Shaft, diameter as per Rule \_\_\_\_\_ Intermediate Shafts, diameter as per Rule \_\_\_\_\_ Thrust Shaft, diameter at collars as per Rule \_\_\_\_\_  
 as fitted \_\_\_\_\_ as fitted \_\_\_\_\_ as fitted \_\_\_\_\_  
 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 \_\_\_\_\_ as fitted \_\_\_\_\_

**Bronze Liners, thickness in way of bushes** as per Rule \_\_\_\_\_ Thickness between bushes 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 or other appliance fitted at the after  
 end of the tube shaft \_\_\_\_\_ 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  
**Method of reversing Engines** direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication  
forced Thickness of cylinder liners 47 m/m Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with  
 non-conducting material insulation 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.** 2 fresh water, 2 sea water Is the sea suction provided with an efficient strainer which can be cleared within the vessel \_\_\_\_\_  
**Bilge Pumps worked from the Main Engines, No.** 2 Diameter 135 m/m Stroke 200 m/m Can one be overhauled while the other is at work \_\_\_\_\_

**Pumps connected to the Main Bilge Line** { No. and Size \_\_\_\_\_ How driven \_\_\_\_\_ }  
**Ballast Pumps, No. and size** \_\_\_\_\_ **Lubricating Oil Pumps, including Spare Pump, No. and size** 2 geared cog wheel pumps  
 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 Holds, &c.** \_\_\_\_\_

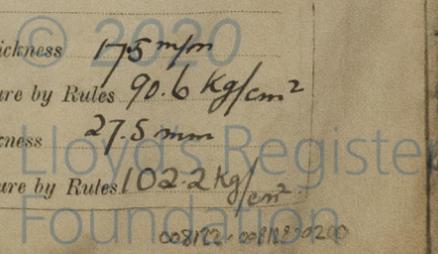
**Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size** \_\_\_\_\_  
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes \_\_\_\_\_ Are the Bilge Suctions in the Machinery Spaces  
 led from easily accessible mud-boxes, placed above the level of 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.** 2 No. of stages 3 Diameters 580/515/120 Stroke 500 m/m Driven by Crank shaft  
**Auxiliary Air Compressors, No.** \_\_\_\_\_ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
**Small Auxiliary Air Compressors, No.** \_\_\_\_\_ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_  
**Scavenging Air Pumps, No.** 4 Diameter 820 m/m Stroke 900 m/m Driven by Cross heads Nos 1+6

**Auxiliary Engines crank shafts, diameter** as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_  
**IR RECEIVERS:—** Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes  
 Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces flanges at top & bottom

Is there a drain arrangement fitted at the lowest part of each receiver yes  
**High Pressure Air Receivers, No.** 2 Cubic capacity of each 200 litres Internal diameter 405 m/m thickness 175 m/m  
 seamless, lap welded or riveted longitudinal joint seamless Material M. Steel Range of tensile strength 42-50 kg/mm<sup>2</sup> Working pressure by Rules 90.6 kg/cm<sup>2</sup>  
**Starting Air Receivers, No.** 6 Total cubic capacity 7200 litres Internal diameter 585 mm thickness 27.5 mm  
 seamless, lap welded or riveted longitudinal joint seamless Material S. M. Steel Range of tensile strength 42-50 kg/mm<sup>2</sup> Working pressure by Rules 102.2 kg/cm<sup>2</sup>



IS A DONKEY BOILER FITTED?

PLANS. Are approved plans forwarded herewith for <sup>Crank</sup> Shafting 11/11/26  
 (If not, state date of approval)  
 Feed water heaters 9/5/27 Donkey Boilers 9/5/27 General Pumping Arrangements

If so, is a report now forwarded? —  
 Receivers 22/12/25 + 23/3/25 Separate Tanks —  
 Oil Fuel Burning Arrangements —

SPARE GEAR will be furnished as per Rules.

The foregoing is a correct description,  
 Maschinenfabrik Augsburg-Nürnberg A/S.  
 (signed) \_\_\_\_\_ (signed) \_\_\_\_\_ Manufacturer.

|  |   |  |
|--|---|--|
| Dates of Survey while building           | During progress of work in shops—           | January 3, February 1, 2, 11, 15, 16, 17, 21, 22, March 1, 2, 4, 7, 9, 11, 12, 14, 15, 16, 17, 21, 22, 23, 28, 30, 31, April 1, 4, 6, 7, 8, 11, 12, 13, 14,          |
|  | working on land—                            | 21, 22, 26, 27, 28, 29, May 2, 4, 5, 11, 13, 18, 19, 20, 21, 23, 24, 25, 30, 31, June 2, 7, 8, 11, 13, 14, 20, 21, 22, 23, 24, 30, July 1, 2, 4, 6, 7, 8, 14, 22, 30 |
|  | Total No. of visits                         | = 99   |
| Dates of Examination of principal parts— | Cylinders                                   | 11-12/10/27  |
|  | Covers                                      | 15/10/27   |
|  | Pistons                                     | 17/10/27   |
|  | Rods  | 17/10/27   |
|  | Connecting rods                             | 17/10/27   |
| Crank shaft                              | Flywheel shaft                              | Thrust shaft   |
| Screw shaft                              | Propeller                                   | Stern tube   |
| Engine seatings                          | Engines holding down bolts                  |  |
| Completion of fitting sea connections    | Completion of pumping arrangements          | Engines tried under working conditions   |
| Crank shaft, Material SM. Ingot Steel    | Identification Mark 25-29, 30, MK 16, 2, 27 | Flywheel shaft, Material   |
| Thrust shaft, Material                   | Identification Mark                         | Intermediate shafts, Material  |
| Tube shaft, Material                     | Identification Mark                         | Screw shaft, Material  |

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  
 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  
 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.) These diesel engines and their accessories  
 have been constructed under special survey in accordance with the Rules and Regulations and other instructions as well as with the approved plans. The materials used in the construction are good and workmanship is satisfactory. Both engines have been tested under full power in the Makers shop for 7 hours, and were found working well. The injection and starting air receivers have been examined when manufactured and were found in accordance with the approved plans. The feed water heaters were inspected during construction and tested when completed, they were found in accordance with the approved plans. In my opinion the vessel for which these engines are intended will be eligible for the record of + L.M.C. (with date) when the engines and their accessories have been satisfactorily fitted on board. For identification the cylinder jackets have been stamped: No. 350. Lloyds test 6 ATM dates P.K.

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

|                                |   |   |                   |
|--------------------------------|---|---|-------------------|
| The amount of Entry Fee ... £  | : | : | When applied for, |
| Special ... £                  | : | : | 19                |
| Donkey Boiler Fee ... £        | : | : | When received,    |
| Travelling Expenses (if any) £ | : | : | 19                |

(S) G. H. B. Bahr + P. A. Krutzfeldt  
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned

FRI. 25 OCT 1929

