

REPORT ON OIL ENGINE MACHINERY.

No. 1008.
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Date of writing Report 3 Nov 1927 When handed in at Local Office 10 Port of Bremen / Angsburg
No. in Survey held at Angsburg Date, First Survey 3rd January Last Survey 31st Oct. 1927
Reg. Book. Number of Visits 99

on the Twin } Screw vessel " " " " Tons { Gross -
Triple } Net -
Quadruple }
Built at Nikolaioff. By whom built Comp. "Kudril Marti" Yard No. 185 When built -
Engines made at Angsburg By whom made Masf. Angsburg-Kirsky. A. G. Engine No. 26710 When made 1927
Donkey Boilers made at - By whom made - Boiler No. - When made -
Brake Horse Power 2800 Owners The Russian Naphtha 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 944

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/cm² Diameter of cylinders 214" 540 mm Length of stroke 350 mm No. of cylinders 12 (2x6) No. of cranks 12 (2x6)
No. 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 Direct 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
Crank wheel 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 -
Propeller Shaft, diameter as per Rule - Screw Shaft, diameter as per Rule - Is the { tube } shaft fitted with a continuous liner { -
as fitted - as fitted -
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
as fitted - as fitted -
Cylinder liner Is the liner 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
oil - Thickness of cylinder liners 47 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with
insulating 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. 2 fresh water, 2 sea water Is the sea suction provided with an efficient strainer which can be cleared within the vessel -
Sea Pumps worked from the Main Engines, No. 2 Diameter 135 mm Stroke 200 mm 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 -
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
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 -
Are all pipes pass through the bunkers - How are they protected -
Are all 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 on 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 mm Driven by crank shaft
Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
All Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
Sweeping Air Pumps, No. 4 Diameter 820 mm Stroke 900 mm Driven by cross heads nos
1 and 6
Auxiliary Engines crank shafts, diameter as per Rule -
as fitted -

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule - yes
Are 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 liters Internal diameter 405 mm thickness 17.5 mm
Are all receivers, lap welded or riveted longitudinal joint seamless Material S. S. Steel Range of tensile strength 42 ÷ 50 kg/cm² Working pressure by Rules 90.6 kg/cm²
Working Air Receivers, No. 6 Total cubic capacity 7200 liters Internal diameter 585 mm thickness 27.5 mm
Are all receivers, lap welded or riveted longitudinal joint seamless Material S. S. Steel Range of tensile strength 42 ÷ 50 kg/cm² Working pressure by Rules 109.2 kg/cm²



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for ^{crank}Shafting 10/10/26
 (If not, state date of approval)
 Feed Water Heaters 9/5/27 Donkey Boilers 9/5/27 General Pumping Arrangements _____ Oil Fuel Burning Arrangements _____

Receivers 29/12/25 & 23/3/26 Separate Tanks _____

SPARE GEAR will be furnished as per Rules.

The foregoing is a correct description,
Maschinenfabrik Augsburg-Nürnberg A.G.

M. A. Müller *M. A. Müller* 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
	During erection on board vessel --	April: 1, 4, 6, 7, 8, 11, 12, 13, 14, 19, 20, 21, 22, 26, 27, 28, 29, May: 2, 4, 5, 11, 13, 18, 19, 20, 21, 23, 24, 28, 30, 31, June: 2, 7, 8, 11
Total No. of visits		14, 20, 21, 22, 23, 24, 30, July: 1, 2, 4, 6, 7, 8, 14, 22, 30, August: 3, 9, 10, 11, Sept: 2, 7, 19, 20, 29, 30, Oct: 4, 7, 10, 11, 13, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Nov: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Dec: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31
Dates of Examination of principal parts		Cylinders <u>11-12/10/27</u> Covers <u>15/10/27</u> Pistons <u>17/10/27</u> Rods <u>17/10/27</u> Connecting rods <u>17/10/27</u>
Crank shaft	<u>20/9/27</u> <u>21/10/27</u>	Flywheel shaft <u>21/10/27</u> Thrust shaft <u>21/10/27</u> Intermediate shafts <u>21/10/27</u> Tube shaft <u>21/10/27</u>
Screw shaft		Propeller <u>21/10/27</u> Stern tube <u>21/10/27</u> Engine seatings <u>21/10/27</u> Engines holding down bolts <u>21/10/27</u>
Completion of fitting sea connections		Completion of pumping arrangements <u>21/10/27</u> Engines tried under working conditions <u>21/10/27</u>
Crank shaft, Material	<u>S. A. Engl. steel</u>	Identification Mark <u>328 M.K. 17.5.27</u>
Thrust shaft, Material		Identification Mark _____
Tube shaft, Material		Identification Mark _____
Screw shaft, Material		Identification Mark _____

Is the flash point of the oil to be used over 150° F. yes

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 the workmanship is satisfactory. Both engines have been tested under full power in the makers' shop for 72 hours and were found working well. The injection and starting air receivers have been examined when manufactured and were 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 LLOYD'S TEST 6 ATM. Date P.K.

The amount of Entry Fee	<u>4/5</u> £ <u>4</u> : <u>16</u> :	When applied for, <u>9.11.27</u>
Special	<u>4/5</u> £ <u>98</u> : <u>0</u> :	
Donkey Boiler Fee	... £ :	When received, <u>8.12.27</u>
Travelling Expenses (if any)	£ <u>10</u> : <u>0</u> :	
" " <u>Hamburg</u>	£ <u>10</u> : <u>0</u> :	
Committee's Minute		<u>25 OCT 1927</u>

G. H. C. Adams

Engineer Surveyor to Lloyd's Register of Shipping.

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

Assigned

See Ref. pt. (28) No 13