

REPORT ON OIL ENGINE MACHINERY.

No. 1008.

11 NOV 1927

Date of writing Report 3 Nov 1927 When handed in at Local Office

Port of Bremen / Angsburg

No. in Survey held at Angsburg
Reg. Book.

Date, First Survey 3rd January Last Survey 31st Oct. 1927

Number of Visits 99

Single
on the Twin
Triple
Quadruple
Screw vesselTons
Gross
Net

Built at Nikolai.

By whom built The Nikolai / State Ship.

Yard No. 185 When built

Engines made at Angsburg

By whom made Angsburg - Kirnly. A. J. 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

ENGINES, &c.—Type of Engines 2 M. A. N. Diesel engines 2 or 4 stroke cycle 2 Single or double acting single
 Minimum 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 40
 Revolutions per minute 1100 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 as fitted 360 mm Crank pin dia. 360 mm Crank Webs Mid. length breadth semi-built shrunk Thickness parallel to axis 365 mm
 Mid. length thickness 235 mm Thickness around eyehole 157.5 mm
 Wheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted
 Propeller Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the tube screw shaft fitted with a continuous liner
 Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule as fitted Is the after end of the liner made watertight in the
 After end of the 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 40 Means of lubrication
 Oil cooled Thickness of cylinder liners 47 mm Are the cylinders fitted with safety valves 40 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
 Bilge 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 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
 Bilge 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 the pipes at pipes pass through the bunkers How are they protected
 Are the pipes at 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
 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
 Ventilating Air Pumps, No. 4 Diameter 820 mm Stroke 900 mm Driven by cross heads 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 40
 Are the internal surfaces of the receivers be examined 40 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 40
 High Pressure Air Receivers, No. 2 Cubic capacity of each 200 liters Internal diameter 405 mm thickness 17.5 mm
 Seamless, lap welded or riveted longitudinal joint seamless Material Lch. 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
 Seamless, lap welded or riveted longitudinal joint seamless Material Lch. Steel Range of tensile strength 42 ÷ 50 kg/cm² Working pressure by Rules 102.2 kg/cm²

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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 General Pumping Arrangements
 Donkey Boilers

Receivers 22/12/25 & 23/3/26 Separate Tanks

Oil Fuel Burning Arrangements

SPARE GEAR will be furnished as per Rules.

The foregoing is a correct description.

Maschinenfabrik Augsburg-Nürnberg A.G.

Manufacturer.

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel --
 Total No. of visits
 Dates of Examination of principal parts—Cylinders 12/10/27 Covers 15/10/27 Pistons 17/10/27 Rods 17/10/27 Connecting rods 17/10/27
 Crank shaft 20/9/27 Flywheel shaft 20/9/27 Thrust shaft 20/9/27 Intermediate shafts 20/9/27 Tube shaft 20/9/27
 Screw shaft 20/9/27 Propeller 20/9/27 Stern tube 20/9/27 Engine seatings 20/9/27 Engines holding down bolts 20/9/27
 Completion of fitting sea connections 20/9/27 Completion of pumping arrangements 20/9/27 Engines tried under working conditions 20/9/27
 Crank shaft, Material S.M. Eng. steel Identification Mark 328-27-30 M.K. 16.5.27 Flywheel shaft, Material Identification Mark
 Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Marks
 Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

Is the flash point of the oil to be used over 150° F. yesIs this machinery duplicate of a previous case no If so, state name of vesselGeneral 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 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 LMC [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.H.

The amount of Entry Fee 4/5 £ 4 : 16 :
 Special 4/5 £ 98 : 0 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ 10 : 0 :
 Committee's Minute

When applied for,

9.11.27

When received,

8.12.27

Assigned

See Ref. 1st (28) No 13



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