

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 8551.

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Date of writing Report 22<sup>nd</sup> June 1931 When handed in at Local Office 24<sup>th</sup> June 1931 Port of Copenhagen  
No. in Survey held at Copenhagen & Nakskov Date, First Survey 13/3 1930 Last Survey 19/6 1931  
Reg. Book. 91530 on the Single Twin Triple Quadruple Screw vessel "MUINAM" Number of Visits 79

Tons Gross 3113.04  
Net 1739.32

Built at Nakskov By whom built % Nakskov Skibsvaerk Yard No. 43 When built 1931  
Engines made at Copenhagen By whom made % Rimmer & Wain Engines No. 1880 When made 1930-1  
Donkey Boilers made at Nakskov By whom made % Nakskov Skibsvaerk Boiler No. 15 When made 1931  
Brake Horse Power ca. 2250 Owners % Det Østasiatiske Handels Selskab Port belonging to Copenhagen  
Nom. Horse Power as per Rule 449 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes  
Trade for which vessel is intended Ocean trad, general cargo.

OIL ENGINES, &c.—Type of Engines Vertical Diesel, trunk piston, air injection 1/2 or 1 stroke cycle 4 Single or double acting, single  
Maximum pressure in cylinders 35 kg/cm<sup>2</sup> Diameter of cylinders 500 mm Length of stroke 900 mm No. of cylinders 2 x 6 No. of cranks 2 x 6  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 688 mm Is there a bearing between each crank yes  
Revolutions per minute 170 Flywheel dia. 1472 Weight 2480 kg Means of ignition Compression of fuel used crude oil  
Crank Shaft, dia. of journals as per Rule 310 mm as fitted 310 mm Crank pin dia. 310 mm Crank Webs Mid. length breadth 630 mm Thickness parallel to axis 195 mm  
Flywheel Shaft, diameter as per Rule 310 mm as fitted 310 mm Intermediate Shafts, diameter as per Rule 8.067" as fitted 8 1/8" Thrust Shaft, diameter at collars as per Rule 8.56" as fitted 300 mm  
Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 8.9" as fitted 8 1/16" = 8.738" Is the shaft fitted with a continuous liner yes  
Bronze Liners, thickness in way of bushes as per Rule 0.567" as fitted 1/16" - 3/4" Thickness between bushes as per rule 0.426" as fitted 1/2" Is the after end of the liner made watertight in the propeller boss yes  
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner in one length yes  
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 yes  
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 yes  
Propeller, dia. 3028 mm Pitch 2587 mm No. of blades 3 Material Bronze whether Moveable No Total Developed Surface 2.86 m<sup>2</sup>  
Method of reversing Engines direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when detached yes Means of lubrication forced  
Thickness of cylinder liners 36 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine led to funnel  
Cooling Water Pumps, No. 2 off, 120 t/h, centrif. Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes  
Bilge Pumps worked from the Main Engines, No. 2 Diameter 150 mm Stroke 136 mm Can one be overhauled while the other is at work yes  
Pumps connected to the Main Bilge Line No. and Size 2 off 150 mm dia x 136 mm str. / 1 off 20 t/h / 1 off 150 t/h (stagnant) How driven by main engines electrically electrically  
Ballast Pumps, No. and size 1 off 150 t/h, rotary Lubricating Oil Pumps, including Spare Pump, No. and size 2 off 50 t/h, cog wheel  
Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 4 off 3", (2 off 3" suction to main eng. bilge pumps only) Pump Room 2 off 3"  
In Holds, &c. No. 1 HOLD: 2 off 2 1/2", COFFER: 1 off 2", No. 2 HOLD: 2 off 2", DEEP T.: 2 off 2 1/2", No. 3 HOLD: 2 off 3", COFF: 1 off 2", No. 4 HOLD: 3 off 2 1/2", TUNN. WELL: 1 off 2 1/2"  
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 off 3 1/2", 1 off 6" from ball. pump  
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes 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 yes  
Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks Valves  
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes Are the Overboard Discharges above or below the deep water line above  
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes  
What pipes pass through the bunkers 1 off 2 1/2" F.P., 2 off 2 1/2", 2 off 3", 3 off 2" bilge pipes. How are they protected  
What pipes pass through the deep tanks 1 off 3 1/2", 2 off 2" F.W. pipes. Have they been tested as per Rule yes  
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes  
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 yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper deck.  
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 Diameter 500-445-102 Stroke 340 mm Driven by main engines  
Auxiliary Air Compressors, No. 3 No. of stages 3 Diameters see special report Stroke Driven by auxiliary engines  
Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 90-35 Stroke 120 mm Driven by steam  
Scavenging Air Pumps, No. Diameter Stroke Driven by  
Auxiliary Engines crank shafts, diameter as per Rule see special report No. Position

AIR 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 and cleaned yes Is a drain fitted at the lowest part of each receiver yes  
High Pressure Air Receivers, No. 2 WORKING 2 SPARE Cubic capacity of each 250 LITERS Internal diameter 312 mm thickness 23 mm  
Seamless, lap welded or riveted longitudinal joint lap welded Material S.M. steel Range of tensile strength 22.2 t/d Working pressure by Rules 67.8 kg/cm<sup>2</sup> Actual 65 kg/cm<sup>2</sup>  
Starting Air Receivers, No. 2 Total cubic capacity 2 x 6 m<sup>3</sup> = 424 cb' Internal diameter 6'-0" thickness 1 1/2" / 32 ENOS: 13/16  
Seamless, lap welded or riveted longitudinal joint 36% riveted Material S.M. steel Range of tensile strength SHELL: 28 t/d WORKING pressure by Rules 24.82 kg/cm<sup>2</sup> Actual 25 kg/cm<sup>2</sup> ENOS: 26 t/d





