

t. 4b

Date of writing report 15.2.60. Received London HELSINGFORS No. 7343
 Date held at Vasa No. of visits 78 In shops 10.10.58 First date 10.12.59 Last date
 On vessel

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

R.B. 19598 Name "LENINGRAD" Gross tons 9425,2
 Country U.S.S.R. Managers Wärtsilä-koncernen Ab, Sandvikens-Skeppsdocka Port of Registry Murmansk
 Built at Helsingfors By Wärtsilä-koncernen Ab, Vasa Mekaniska Verkstad Yard No. 366 When 1961-11
 Engines made at Vasa By Wärtsilä-koncernen Ab, Vasa Mekaniska Verkstad Eng. No. 186 When 1959

Particulars of restricted service of ship, if limited for classification
 Particulars of vegetable or similar cargo oil notation, if required
 Is ship to be classed for navigation in ice? no Is ship intended to carry petroleum in bulk? no
 Refrigerating machinery fitted? no If so, is it for cargo purposes? no Type of refrigerant no
 Refrigerating machinery compartment isolated from the propelling machinery space? no Is the refrigerated cargo installation intended to be classed? no

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the marking is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines 9 No. of propellers 1 Brief description of propulsion system Diesel electric
MAIN RECIPROCATING ENGINES. Licence Name and Type No. Wärtsilä-Sulzer 9MH51/55
 No. of cylinders per engine 9 Dia. of cylinders 510 mm stroke(s) 550 mm 2 or 4 stroke cycle 2 Single or double acting single
 Maximum approved BHP per engine 3250 at 330 RPM of engine and 330 RPM of propeller.
 Responding MIP 5,3 kg/mm² (For DA engines give MIP top & bottom) Maximum cylinder pressure 65 kg/cm² Machinery numeral no
 Are the cylinders arranged in Vee or other special formation? no If so, number of crankshafts per engine no

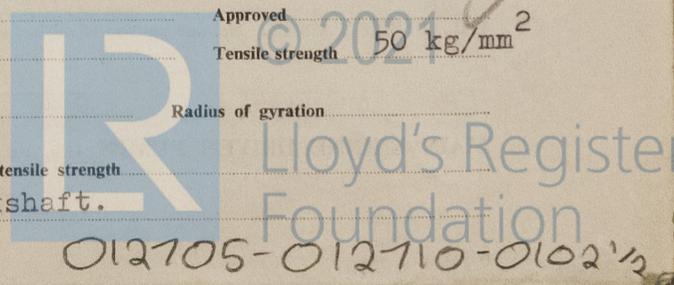
TWO STROKE ENGINES. Is the engine of opposed piston type? no If so, how are upper pistons connected to crankshaft? no
 Are the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? ports in cyl No. and type of mechanically driven scavenge pumps or blowers per engine and how driven 9 lever driven scavenge pumps (piston pumps)
 No. of exhaust gas driven scavenge blowers per engine no Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action? no
 Is a stand-by or emergency pump or blower fitted, state how driven no No. of scavenge air coolers no Scavenge air pressure at full load no
 Are scavenge manifold explosion relief valves fitted? no

THREE STROKE ENGINES. Is the engine supercharged? no Are the undersides of the pistons arranged as supercharge pumps? no No. of exhaust gas driven blowers per engine no
 No. of supercharge air coolers per engine no Supercharge air pressure no Can engine operate without supercharger? no

TWO & FOUR STROKE ENGINES--GENERAL. No. of valves per cylinder: Fuel 1 Inlet no Exhaust no Starting 1 Safety 1
 Material of cylinder covers cast steel Material of piston crowns Forged steel Is the engine equipped to operate on heavy fuel oil? no
 Lubricating medium for:—Cylinders fresh water Pistons oil Fuel valves fresh water Overall diameter of piston rod for double acting engines no
 Is the rod fitted with a sleeve? no Is welded construction employed for: Bedplate? no Frames? no Entablature? no Is the crankcase separated from the underside of pistons? no Is the engine of crosshead or trunk piston type? trunk Total internal volume of crankcase 8,5 m³ No. and total area of explosion relief devices 9x250cm²=2250cm² Are flame guards or traps fitted to relief devices? no Is the crankcase readily accessible? yes If not, must the engine be removed for overhaul of bearings, etc? no Is the engine secured directly to the tank top or to a built-up seating? no How is the engine started? By air
 Can the engine be directly reversed? no If not, how is reversing obtained? No reversing required.
 Has the engine been tested working in the shop? yes How long at full power? 8 hours

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 16.4.57 State barred speed range(s), if imposed Case 319 U, 23.4.57
 Working propeller no For spare propeller no Is a governor fitted? yes Is a torsional vibration damper or detuner fitted to the shafting? no

Where are bearings positioned? no Type no No. of main bearings 11 Are main bearings of ball or roller type? no Distance between inner edges of bearings in way of crank(s) 570 mm Distance between centre lines of side cranks or eccentrics of opposed piston engines no
 Crankshaft type: Built, semi-built, solid (State which) solid
 Diameter of journals 310 Centre 310 mm Breadth of webs at mid-throw 450 mm Axial thickness of webs 163 mm
 Diameter of crankpins 210 mm 120 mm Dia Hols Pins no Minimum no
 Crank, radial thickness around eyeholes no Are dowel pins fitted? no Crankshaft material no Journals no Approved no
 Webs no Tensile strength 50 kg/mm²
 Diameter of flywheel no Weight no Are balance weights fitted? no Total weight no Radius of gyration no
 Diameter of flywheel shaft no Material no Minimum approved tensile strength no
 Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) Integral with crankshaft.



GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

This Diesel Engine has been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters. Quality of materials and workmanship found good.

J. W. ...
Engineer Surveyor to Lloyd's Register of Ships

PARTICULARS OF IDENTIFICATION MARKS ((Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

RODS Lloyd's DSF HS 121 4.9.58 (3 pice) Lloyd's DSF HS 119 4.9.58 (3 pice) Lloyd's DSF HS 122 9.9.58

CRANKSHAFT OR ROTORSHAFT

FLYWHEEL SHAFT Lloyd's KLN AS 938 1.9.58 Lloyd's KLN AS 916 1.9.58

THRUSTSHAFT

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS

Is the installation a duplicate of a previous case? yes If so, state name of vessel Yard No. 365. Report No. 6968

Date of approval of plans for crankshaft 6.10.55 Straight shafting _____ Gearing _____ Clutch _____

Separate oil fuel tanks _____ Pumping arrangements _____ Oil fuel arrangements _____

Cargo oil pumping arrangements _____ Air receivers _____ Donkey boilers _____

Dates of examination of principal parts:—

Fitting of stern tube _____ Fitting of propeller _____ Completion of sea connections _____ Alignment of crankshaft in main bearings _____

Engine chocks & bolts _____ Alignment of gearing _____ Alignment of straight shafting _____ Testing of pumping arrangements _____

Oil fuel lines _____ Donkey boiler supports _____ Steering machinery _____ Windlass _____

Date of Committee FRIDAY 16 FEB 1962 Special Survey Fee Fmk. 267.000

Decision See H/P 8382

Expenses Fmk. 8.380.-

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