

Rpt. 4b

119 FEB 1959
Date of writing report 15.2.60. Received London HELSINGFORS No. 7122
In shops 78 19.1.58 27.4.59
Insulator survey held at Vasa No. of visits On vessel First date Last date

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

o. in R.B. 19598 Name "LENINGRAD" Gross tons 9425,2
Owners U.S.S.R. Managers Wärtsilä-koncernen Ab, Sandvikens Skeppsdocka
subm Helsingfors By Wärtsilä-koncernen Ab, Wasa Mekaniska Verkstad
install built at Vasa By
Main Engines made at Vasa By
attach bearing made at By
monkey boilers made at By
Machinery installed at By

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? Is ship intended to carry petroleum in bulk?
Is refrigerating machinery fitted? If so, is it for cargo purposes? Type of refrigerant
Is the refrigerating machinery compartment isolated from the propelling machinery space? Is the refrigerated cargo installation intended to be classed?

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 wording 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 No. of propellers Brief description of propulsion system Diesel Electric
MAIN RECIPROCATING ENGINES. Licence Name and Type No. Wärtsilä-Sulzer 9 MH 51/55
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 RPM of propeller.
Corresponding MIP 5,3 kg/cm² (For DA engines give MIP top & bottom) Maximum cylinder pressure 65 kg/cm² Machinery numeral
Are the cylinders arranged in Vee or other special formation? no If so, number of crankshafts per engine -

NO STROKE ENGINES. Is the engine of opposed piston type? no If so, how are upper pistons connected to crankshaft?
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
line and how driven 9 lever driven scavenge pumps (piston pumps)
of exhaust gas driven scavenge blowers per engine Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?
a stand-by or emergency pump or blower is fitted, state how driven No. of scavenge air coolers Scavenge air pressure at full
ver Are scavenge manifold explosion relief valves fitted?

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

FO & FOUR STROKE ENGINES-GENERAL. No. of valves per cylinder: Fuel 1 Inlet - Exhaust - 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
ooling medium for :Cylinders fresh water Pistons oil Fuel valves fresh water Overall diameter of piston rod for double acting engines
the rod fitted with a sleeve? Is welded construction employed for: Bedplate? no Frames? no Entablature? no Is the crankcase separated from the
erside 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
ices 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
shaul of bearings, etc? Is the engine secured directly to the tank top or to a built-up seating? How is the engine started? by air
n 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
Date of approval of torsional vibration characteristics of the propelling machinery system 16.4.57 Case, 3190
23.4.57

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

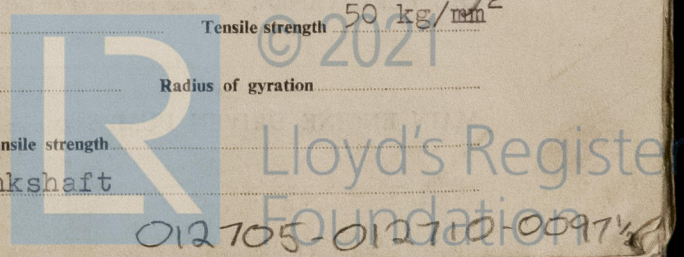
Where positioned? Type No. of main bearings 11 Are main bearings of ball or roller
pe? no Distance between inner edges of bearings in way of crank(s) 570 mm Distance between centre lines of side cranks or eccentrics of opposed piston engines -

rankshaft type: Built, semi-built, solid. (State which) solid
diameter of journals 310 mm Diameter of crankpins 120mm Dia Hole Breadth of webs at mid-throw 450 mm Axial thickness of webs 163 mm

shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals Pins Minimum
Webs Tensile strength 50 kg/mm²

diameter of flywheel Weight Are balance weights fitted? Total weight Radius of gyration
diameter of flywheel shaft Material Minimum approved tensile strength

wheel 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 and 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.

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping

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 115 28.8.58 (7piece) Lloyd's DSF HS 116 28.8.58 (2piece)

CRANKSHAFT OR ROTORSHAFT } Lloyd's KLN AS 510 3.11.58 Lloyd's KLN AS 991 3.11.58

FLYWHEEL SHAFT

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 Hfs 8382

Expenses Fmk. 8.070:—

Date when A/c rendered 26.5.59.



Lloyd's Register
Foundation