

Date of writing report 21.2.61 Received London Port Helsingfors No. 7651
 Date held at Vasa No. of visits 76 In shops 8.1.1960 First date Last date 9.6.60
 On vessel

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

Name Gross tons
 Managers Port of Registry Year Month
 Built at Helsingfors By Wärtsilä-koncernen Ab, Sandvikens Skeppsdocka Yard No. 366 When
 Engines made at Vasa By Wärtsilä-koncernen Ab, Wasa Mekaniska Verkstad Eng. No. 187 When 1960
 Ring made at By
 Boilers made at By Blr. Nos. When
 Installed at By When

of restricted service of ship, if limited for classification
 of vegetable or similar cargo oil notation, if required
 classed for navigation in ice? Is ship intended to carry petroleum in bulk?
 Refrigerating machinery fitted? If so, is it for cargo purposes? Type of refrigerant
 Refrigerating machinery compartment isolated from the propelling machinery space? Is the refrigerated cargo installation intended to be classed?

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 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 not be repeated below, but the port and report number should be stated.

Main engines No. of propellers Brief description of propulsion system Diesel Electric

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

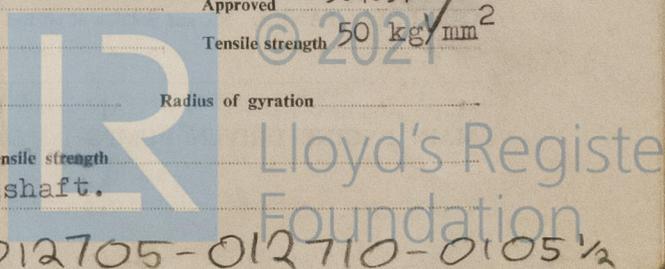
ROCKE ENGINES. Is the engine of opposed piston type? no If so, how are upper pistons connected to crankshaft?
 Scavenging air discharged through ports in the cylinders or through valve(s) in the cylinder covers? ports in cyl. No. and type of mechanically driven scavenge pumps or blowers per engine and how driven 9 lever driven scavenge pumps (piston pumps)
 No. of exhaust gas driven scavenge blowers per engine Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?
 Stand-by or emergency pump or blower is fitted, state how driven No. of scavenge air coolers Scavenge air pressure at full load 0,22 atm. 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 engine
 No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

TWO & 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 cast 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
 Piston rod fitted with a sleeve? Is welded construction employed for: Bedplate? no Frames? no Entablature? no Is the crankcase separated from the side 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 haul 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
 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 State barred speed range(s), if imposed
 Working propeller For spare propeller Is a governor fitted? yes Is a torsional vibration damper or detuner fitted to the shafting? no
 Propeller positioned? Type No. of main bearings 11 Are main bearings of ball or roller
 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

Crankshaft type: Built, semi-built, solid. (State which) solid
 Diameter of journals 310 mm Diameter of crankpins 310 mm Centre 310 mm Breadth of webs at mid-throw 450 mm Axial thickness of webs 163 mm
120mm HOLE SIX 120mm DIA CENTRAL HOLES Pins Minimum
 Crank, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals Approved 23.4.57
 Webs Tensile strength 50 kg/mm²
 Diameter of flywheel 1030 mm Weight 455,5 kg Are balance weights fitted? Total weight Radius of gyration
 Diameter of flywheel shaft Material Minimum approved tensile strength
 Crankshaft: separate, integral with crankshaft, integral with thrustshaft. (State which) Integral with crankshaft.



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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. Nelson

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

CRANKSHAFT OR ROTORSHAFT

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

Date of approval of plans for crankshaft 13.6.55 6.10.55 Straight shafting 15.5.57 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. 267.00

Decision See Hg 8382

Expenses Fmk. 8.750

Date when A/c rendered 4.10.60

