

Rpt. 4b

Date of writing report 29th August, 1958. Received London 1 SEP 1958 Port M A L M Ö No. 3804
Survey held at S Ö L V E S B O R G No. of visits In shops - On vessel 17 First date 2/4 Last date 20/8 1958.

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. 90857 Name M/S "O C T A V I A" Gross tons 499
(Suppl.) Owners Rederi AB Svenska Lloyd Managers K.R. Bökman Port of Registry Gothenburg
Hull built at Sölvesborg By Sölvesborgs Varvs- & Rederi AB Yard No. 51 When 1958 8
Main Engines made at Frederikshavn By Alpha-Diesel A/S Eng. No. 8383 When
Gearing made at By
Donkey boilers made at By Blr. Nos. When
Machinery installed at Sölvesborg By Sölvesborgs Varvs- & Rederi AB When 1958

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? Yes Is ship intended to carry petroleum in bulk? No
Is refrigerating machinery fitted? Yes If so, is it for cargo purposes? No Type of refrigerant Freon
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

MAIN RECIPROCATING ENGINES. Licence Name and Type No.

No. of cylinders per engine Dia. of cylinders stroke(s) 2 or 4 stroke cycle Single or double acting
Maximum approved BHP per engine at RPM of engine and 310 RPM of propeller.
Corresponding MIP (For DA engines give MIP top & bottom) Maximum cylinder pressure Machinery numeral
Are the cylinders arranged in Vee or other special formation? If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? If so, how are upper pistons connected to crankshaft?
Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? No. and type of mechanically driven scavenge pumps or blowers per engine and how driven
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?
If a stand-by or emergency pump or blower is fitted, state how driven No. of scavenge air coolers Scavenge air pressure at full power
Are scavenge manifold explosion relief valves fitted?

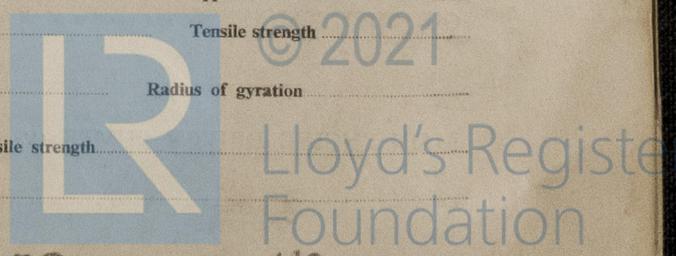
FOUR STROKE ENGINES. Is the engine supercharged? Are the undersides of the pistons arranged as supercharge pumps? No. of exhaust gas driven blowers per engine
No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

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

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 17/5/58 389 G. State barred speed range(s), if imposed
for working propeller For spare propeller Is a governor fitted? Is a torsional vibration damper or detuner fitted to the shafting?
Where positioned? Type No. of main bearings Are main bearings of ball or roller type?
Distance between inner edges of bearings in way of crank(s) Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which)
Diameter of journals Diameter of crankpins Centre Breadth of webs at mid-throw Axial thickness of webs
Side Pins Minimum
If shrunk, radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals Approved
Webs Tensile strength
Diameter of flywheel Weight Are balance weights fitted? Total weight Radius of gyration
Diameter of flywheel shaft Material Minimum approved tensile strength
Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which)

Handwritten signature and date 18/9/58



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MAIN GAS TURBINES. Name and Type No.

No. of sets of turbines Open or closed cycle BHP per set at RPM of output shaft
How is drive transmitted to propeller shaft?
ARRANGEMENT OF TURBINES. HP drives at RPM HP gas inlet temperature pressure
IP drives at RPM IP gas inlet temperature pressure
LP drives at RPM LP gas inlet temperature pressure
No. of air compressors per set Centrifugal or axial flow type? Material of turbine blades. Material of compressor blades
No. of air coolers per set No. of heat exchangers per set How are turbines started?
How is reversing effected? Are the turbines operated in conjunction with free piston gas generators?
Total No. of free piston gas generators Diameter of working pistons Diameter of compressor pistons No. of double strokes per minute at full power
Gas delivery pressure Gas delivery temperature Have the turbines and attached equipment been tested working in the shop? How long at full power?

ELECTRIC PROPULSION (Reciprocating engines or gas turbines. Electrical particulars to be reported on Form 4d.)

No. of generators KW per generator at RPM AC or DC? Position
No. of propulsion motors SHP per motor at RPM Position
How is power obtained for excitation of generators? Motors?

REDUCTION GEARING (Reciprocating engines or gas turbines. A small line sketch should be attached showing arrangement of gearing.)

Is gearing of single or double helical type? If single, position of gear thrust bearing Is gearing of epicyclic type?
PCD of pinions: First reduction Second reduction PCD of wheels: First reduction Main
Material of pinions Tensile strength Material of wheel rims Tensile strength
Are gear teeth surface hardened? How are teeth finished? Diameter of pinion journals Wheel shaft journals
Are the wheels of welded construction? Is gearcase of welded construction? Has the wheel/gearcase been heat treated on completion of welding? Where is the propeller thrust bearing located? Are gear bearings of ball or roller type?

CLUTCHES, FLEXIBLE COUPLINGS, ETC. If a clutch or other flexible connection is fitted between engine/turbine and gearing or between engine and line shafting give brief description and, for clutches, state how operated.

Can the main engine be used for purposes other than propulsion when declutched? If so, what?

STRAIGHT SHAFTING. Diameter of thrustshaft. Material. Minimum approved tensile strength.

Shaft separate or integral with crank or wheel shaft? Diameter of intermediate shaft Material.
Minimum approved tensile strength Diameter of screwshaft cone at large end Is screwshaft fitted with a continuous liner?
Diameter of tube shaft. (If these are separate shafts) Is tube shaft fitted with a continuous liner in way of stern tube Thickness of screw/tube shaft liner
bearings Thickness between bearings Material of screw/tube shaft Minimum approved tensile strength.
Is an approved oil gland fitted? If so, state type Length of bearing next to and supporting propeller
Material of bearing In multiple screw vessels is the liner between stern tube and A bracket continuous? If not, is the exposed length of shafting between liners readily visible in dry dock?

PROPELLER. Diameter of propeller Pitch Built up or solid Total developed surface.

No. of blades Blade thickness at top of root fillet Blade material Moment of inertia of dry propeller
If propeller is of special design, state type Is propeller of reversible pitch type? If so, is it of approved design?
State method of control Material of spare propeller Moment of inertia

AIR COMPRESSORS & RECEIVERS. No. of main engine driven compressors per engine Can they be declutched?

No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) One - 20 m³/h at 1000 R/M driven by port aux. oil engine. HAM 58/190. (No. 8 M.E. cyl. can also be used as compressor).
No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) 2 at 200/22

How are receivers first charged? By independently driven air compressor. Maximum working pressure of starting air system 30 kg/cm² Are the safety devices in accordance with the Rules? Has the starting of the main engines been tested and found satisfactory? Yes

COOLERS. No. of main engine fresh water coolers 1 off No. of main engine lubricating oil coolers.

OIL FUEL TANKS. No. and position of oil fuel settling or service tanks not forming part of hull structure

MAIN ENGINE DRIVEN PUMPS (No. and Purpose) 1 lubricating oil pump, capacity 29 m³/h.

Table with columns: INDEPENDENT PUMPS, SUCTION, DELIVERY. Lists pumps like Ballast Pump, Bilge Pump, Fire pump, Oil fuel transfer pump, Lubr. oil pump with their capacities and connections.

BILGE SUCTIONS. No. and size in each hold, deep tank or pump room 4 - 68 mm in holds

No. and size connected to main bilge line in main engine room 1 - 51,5 mm In tunnel No tunnel

In aux. engine room None Size and position of direct bilge suction in machinery spaces 1 - 82,5 mm
p.s. fwd, 1 - 70 mm s.s. fwd. Size and position of emergency bilge suction in machinery spaces 1 - 82,5 mm p.s. fwd.

Is the bilge or ballast system fitted with means for separating oily water on the overboard discharge side? None Do the piping arrangements comply with the Rules including special requirements for ships carrying petroleum in bulk, cargo oil or classed for navigation in ice? (strike out words not applicable). Yes

STEAM & OIL ENGINE AUXILIARIES

Table with columns: Position of each, Type, Made by, Port and No. of Rpt. or Cert., Driven Machinery (For electric generators, state output). Lists Pelapone Eng. Ltd. generators.

Is electric current used for essential services at sea? Yes If so, state the minimum No. and capacity of generators required in order that the ship may operate at sea. 1 - 20 K.W.

STEAM INSTALLATION. No. of donkey boilers burning oil fuel W.P. Type.

Position
Is a superheater fitted? Are these boilers also heated by exhaust gas? No. of donkey boilers heated by exhaust gas only? W.P.
Type Position Can the exhaust heated boilers deliver steam directly to the steam range or do they operate only as economisers in conjunction with oil fired boilers? Port and No. of report on donkey boilers
Is steam essential for operation of the ship at sea? Are any steam pipes over 3 ins. bore? If so, what is their material?
For oil fired boilers is the arrangement of pipes, valves, controls, etc., in accordance with the Rules? No. of oil burning pressure units No. of steam condensers No. of Evaporators

STEERING GEAR. (State No. and Type of Steam Engines, Electric Motors, Hydraulic Pumps and other particulars) 1 comb. el. & handhydraulic. Maker Svendborg Skibsvaerft A/S, type 24/4 L, No. 891, Pump type P4 No. 1044. El. motor Thrige No. 2073176

Have the Rule Requirements for fire extinguishing arrangements been complied with? Yes Brief description of arrangements 1 - 20 Kgs CO2 apparatus, 2 portable froth apparatus and 2 fire hydrants.

Has the spare gear required by the Rules been supplied? Yes Has all the machinery been tried under full working conditions and found satisfactory? Yes Date and duration of full power sea trials of main engines 7 hours Does this machinery installation contain any features of a novel or experimental nature? (Give particulars) No

The foregoing description of the main engine and installation is correct and the particulars are as approved for torsional vibration characteristics (strike out words not applicable).



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