

120 JAN 1958

Date of writing report 18th January, 1958. Received London Port MALMÖ No. 3733
Survey held at Sölvesborg No. of visits In shops - On vessel 20 First date 20/9 1957 Last date 10/1 1958.

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. 42194 Name M/S "O F E L I A" Gross tons 500
Owners Rederi AB Svenska Lloyd Managers K.R. Bökman Port of Registry Gothenburg
Built at Sölvesborg By Sölvesborgs Varvs- & Rederi AB Yard No. 49 Year Month 1958 1
Main Engines made at Frederikshavn By Alpha-Diesel A/S Eng. No. 8265 When 1957

Boilers made at By Blr. Nos. When
Machinery installed at Sölvesborg By Sölvesborgs Varvs- & Rederi AB When 1958
Parts of restricted service of ship, if limited for classification
Parts of vegetable or similar cargo oil notation, if required
Can be classed for navigation in ice? Yes Is ship intended to carry petroleum in bulk? No
Refrigerating machinery fitted? Yes If so, is it for cargo purposes? No Type of refrigerant Freon
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 answer 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.

Main engines No. of propellers Brief description of propulsion system Hyd. compound + slow propeller

RECIPROCATING ENGINES. Licence Name and Type No.
Cylinders per engine 8 Dia. of cylinders 290 stroke(s) 490 2 or 4 stroke cycle 2 Single or double acting SA
Approved BHP per engine 960 at 310 RPM of engine and 310 RPM of propeller.
Indicating MIP (For DA engines give MIP top & bottom) Maximum cylinder pressure Machinery numeral 192
Cylinders arranged in Vee or other special formation? If so, number of crankshafts per engine

ROCKE ENGINES. Is the engine of opposed piston type? If so, how are upper pistons connected to crankshaft?
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
How driven
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?
Emergency pump or blower is fitted, state how driven No. of scavenge air coolers Scavenge air pressure at full load
Are scavenge manifold explosion relief valves fitted?

ROCKE 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?

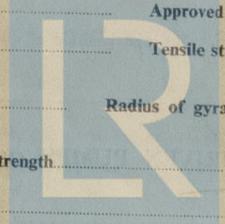
FOUR STROKE ENGINES-GENERAL. No. of valves per cylinder: Fuel Inlet Exhaust Starting Safety
Cylinder covers Material of piston crowns Is the engine equipped to operate on heavy fuel oil?
Material for: Cylinders Pistons Fuel valves Overall diameter of piston rod for double acting engines
Crankcase covered with a sleeve? Is welded construction employed for: Bedplate? Frames? Entablature? Is the crankcase separated from the cylinder covers?
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 access?
Is the engine secured directly to the tank top or to a built-up seating? How is the engine started?
Can be directly reversed? No If not, how is reversing obtained?
Has been tested working in the shop? How long at full power?

FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 13-9-57 3899. State barred speed range(s), if imposed
Propeller 234/269mm For spare propeller Is a governor fitted? Is a torsional vibration damper or detuner fitted to the shafting?
Type No. of main bearings 10 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
Type: Built, semi-built, solid. (State which)
Journals Diameter of crankpins Centre Breadth of webs at mid-throw Axial thickness of webs
Side Minimum
Radial thickness around eyeholes Are dowel pins fitted? Crankshaft material Journals Approved Tensile strength
Flywheel Weight Are balance weights fitted? Total weight Radius of gyration
Flywheel shaft Material Minimum approved tensile strength
Fit: separate, integral with crankshaft, integral with thrustshaft. (State which)

Handwritten initials and marks in red ink.

Handwritten signature and date 9/2/58.



© 2020 Lloyd's Register Foundation

003487-003494-03031/2

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 _____

(A small diagram should be attached showing gas cycle.)

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 at 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 57/1564

No. of 3 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) 2/200 litres

How are receivers first charged? _____ 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 1 off

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 P.O.

INDEPENDENT PUMPS Name below essential pumps, state position and how driven. Give capacity of bilge pumps.	Service for which each pump is connected to be marked thus X														
	SUCTION							DELIVERY							
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel	Fresh Water Cooling	Sea	Feed Tanks	Lub. Oil	Boiler Feed	Salt Water Cooling	Fresh Water Cooling	Oil Fuel Tanks	Fire Main	Lub. Oil	Piston Cooling
Ballast pump Port fwd. El. driven 50 M ³ /H.	X	X	X			X									
Bilge pump Stbd. fwd. El. driven 30 M ³ /H.	X	X				X							X		
Fire pump Port fwd El. driven 20 M ³ /H.					X	X					X		X		
Oil fuel transf. pump Stbd. aft. El. driven 8 M ³ /H.				X								X			
Lubr. oil pump Centre fwd. El. driven 29 M ³ /H.							X							X	

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

Position of each	Type	Made by	Port and No. of Rpt. or Cert.	Driven Machinery (For electric generators, state output)
Port side	Heavy Oil Engine	Pelopone Eng. Ltd	NOT. C 25993	El. generator 38 KW.
Stbd. side	" " "	" " "	NOT. C 25994	" " 38 KW.
Stbd. aft.	" " "	" " "	NOT. C 25995	" " 38 KW.
Port side (Harbour)	" " "	" " "	NOT. C 26063	" " 18 KW.

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 KW

Is an electric generator driven by Main Engine? Yes

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:-

Svendsborgs Skibsvaerft A/S, type 24/4 L, No. 890, Pump type P4 No. 572 El. motor Thrige No. 2063965.

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

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 9.1.58.

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).



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 give 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.

The engine of this ship, built under Special Survey as per Copenhagen Surveyors report No. 16614 has been installed onboard under my supervision and to my satisfaction in accordance with the Rules, approved plans and Secretary's letters

The main engine, reversible propeller and manoeuvring of same, auxiliary oil engines, pumps etc. have been tested under full working conditions and found to work satisfactorily.

The machinery of this ship is eligible, in my opinion, to be classed in the Register Book with record of YMC 1.58 and notation of TS(OG).

✓ Main engine not to be operated continuously between 234 and 269 R.P.M. (Notice boards to this effect fitted at control stations in engine room and navigation bridge and the tachometers at these places marked).

X It is the Owners intention to adopt Continuous Survey in the case of this ship.

X Certificate to be sent to Lloyd's Register, Malmö.

Photostat copy of Copenhagen Surveyors report No. 16614 is returned herewith.

A. Jönning
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? _____ If so, state name of vessel _____

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

Separate oil fuel tanks _____ Pumping arrangements 1.2.57. _____ Oil fuel arrangements 1.2.57. _____

Cargo oil pumping arrangements _____ Air receivers _____ Donkey boilers _____

Dates of examination of principal parts:—

Fitting of stern tube 20.9.57 Fitting of propeller 25.9.57 Completion of sea connections 25.9.57 Alignment of crankshaft in main bearings 15.10.57.

Engine chocks & bolts 23.10.57. Alignment of gearing — Alignment of straight shafting 15.10.57 Testing of pumping arrangements 8.1.58.

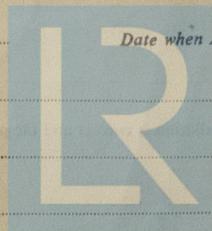
Oil fuel lines 8.1.58 Donkey boiler supports — Steering machinery 9.1.58 Windlass 9.1.58

Date of Committee TUESDAY 18 FEB 1958 Special Survey Fee (Dur. inst.) Kr. 790:—

Decision See Rpt. 1. *BAB*

Expenses _____

Date when A/c rendered 18th January, 1958.



Lloyd's Register Foundation