

Rpt. 4b

ALPHA DIESEL A/S. O/N 3196.

28 DEC 1959

Date of writing report 16-12-59 Received London Aalborg Port No. ABG 17978
Survey held at Frederikshavn No. of visits 13 In shops 24-6-59 First date 10-11-59 Last date

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name 'ARUM' Gross tons
Owners Managers Port of Registry Year Month
Hull built at Beverley, England By Cook, Welton & Gemmell Ltd. Yard No. 954 When
Main Engines made at Frederikshavn By Alpha Diesel A/S Eng. No. 8608 When 1959-11
Coupling Gearing made at Horsens By A/S Møller & Jochumsen
Donkey boilers made at By Blr. Nos. When
Machinery installed at By When

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?
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 1 No. of propellers 1 Brief description of propulsion system oil operated coupling, reversible propeller

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Alpha Diesel A/S. Type 497 VO.

No. of cylinders per engine 7 Dia. of cylinders 298 mm stroke(s) 490 mm 2 or 4 stroke cycle 2 Single or double acting single
Maximum approved BHP per engine 840 at 310 RPM of engine and 310 RPM of propeller.
Corresponding MIP 6.46 kg/cm2 (For DA engines give MIP top & bottom) Maximum cylinder pressure 60 kg/cm2 Machinery numeral 168.
Are the cylinders arranged in Vee or other special formation? no, vertical. If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? no 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? ports in cyls. No. and type of mechanically driven scavenge pumps or blowers per engine and how driven 1 off direct driven double acting piston pump.

No. of exhaust gas driven scavenge blowers per engine none 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 none Scavenge air pressure at full power 0.15 kg/cm2 Are scavenge manifold explosion relief valves fitted? yes

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 1 off Inlet none Exhaust none Starting 1 off Safety 1 off

Material of cylinder covers cast iron Material of piston crowns cast iron Is the engine equipped to operate on heavy fuel oil? no
Cooling medium for :-Cylinders fresh water Pistons lub. oil Fuel valves Overall diameter of piston rod for double acting engines

Is the rod fitted with a sleeve? 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 3.48 m3 No. and total area of explosion relief

devices 4 - 720 cm2 Are flame guards or traps fitted to relief devices? yes Is the crankcase readily accessible? yes 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? How is the engine started? by comp. air

Can the engine be directly reversed? no If not, how is reversing obtained? reversible propeller.

Has the engine been tested working in the shop? yes How long at full power? 5 hours. approval outstanding

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system approval outstanding State barred speed range(s), if imposed

for 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 8 Are main bearings of ball or roller

type? no Distance between inner edges of bearings in way of crank(s) 385 mm Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which) semi-built.
Diameter of journals 200 mm Diameter of crankpins Centre 195 mm Breadth of webs at mid-throw 370 mm Axial thickness of webs 105 mm

If shrunk, radial thickness around eyeholes 116 mm Are dowel pins fitted? no Crankshaft material Journals SMI steel Approved
Webs cast steel Tensile strength 44 kg/mm2

Diameter of flywheel 1120 mm Weight 660 kg. Are balance weights fitted? yes Total weight 80.68 kgm2 GD2 500 kgm2

Diameter of flywheel shaft Material balance weights flywheel Minimum approved tensile strength

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) integral with crankshaft.





