

Rpt. 4b

ALPHA DIESEL A/S, O/N 3373.

Date of writing report 6-1-1960

Received London

Port Aalborg

No.

15 JAN 1960 8

Survey held at Frederikshavn

No. of visits 9
On vessel

First date 26-6

Last date 10-12-59

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name To the order of Messrs. Centromor, Warsaw, Poland. Gross tons

Owners Managers Port of Registry

Hull built at Gdynia, Poland. By Stocznia im Komuny Paryskiej Yard No. B 471 no. 7 Year Month

Main Engines made at Frederikshavn By Alpha Diesel A/S Eng. No. 8647 When 1959-12

Gearing made at By

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? yes, Class 3. 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 reversible oil engine direct to propeller

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Alpha Diesel A/S, Type 498 R

No. of cylinders per engine 8 Dia. of cylinders 290 mm stroke(s) 490 mm 2 or 4 stroke cycle 2 Single or double acting single

Maximum approved BHP per engine 960 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 192

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 double acting piston pump driven by the main engine.

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 0.115 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 fuel oil 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 4.06 m³ No. and total area of explosion reliefdevices 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? yes If not, how is reversing obtained?

Has the engine been tested working in the shop? yes How long at full power? 6 hours.

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 23-7-59 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 9 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

Diameter of flywheel 870 mm Weight 440 kg Are balance weights fitted? yes GD2 Total weight 56 kgm² GD2 flywheel 180 kgm²Diameter of flywheel shaft Material Minimum approved tensile strength GD2 flywheel flange 120 kgm²

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

012705-012710-0064 1/2

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 oil engine has been built under Special Survey in accordance with the requirements of the Rules, the approved plans and the Secretary's letters.

The material used has been tested and examined as required by the Rules, and the workmanship is good.

Crank case explosion relief devices have been fitted.

On completion the engine was tested in the shop under full power working conditions and under manoeuvrings and found satisfactory.

Accordingly in my opinion this engine is eligible to be fitted in a vessel classed with this Society.

The air receivers will not be delivered by Alpha Diesel A/S.

The propeller equipment to be delivered by The Gdynia Shipyard.

J. H. Min.

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 8 connecting rods: Lloyds CPN 3057 GS 14-7-59 ABG(3 off), 4433 GS 14-7-59 ABG(5 off)

CRANKSHAFT OR ROTORSHAFT : " " 4149 GS 26-6-59 ABG

FLYWHEEL SHAFT

THRUSTSHAFT : " " 4681 MN 20-8-59 ABG

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS 8 cylinders: Lloyds test ABG 7 atm. GS 26-6-59.

8 cyl.covers: " " " 7 " GS 14-7-59.

8 pistons : " " " 7 " GS 14-7-59.

1 lub.oil cooler f.engine:Lloyds test ABG 5 atm.GS 14-7-59.1 HP comp:Lloyds test ABG 60/7 atm.

1 oil cooler f.fuel valves: " " " 5 " GS 8-12-59.2 pl.pumps: " " " 5 atm. GS 7-7-59.

Is the installation a duplicate of a previous case? yes If so, state name of vessel Centromor, Yard nos. 1-6

Date of approval of plans for crankshaft 4-12-59 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 24 FEB 1961

Special Survey Fee Kr. 1720.-

Decision See Rpt. 1.

Expenses Kr. 90.-

