

See also AALBORG F.E. Report 4b No. 17735 attached.

MACRO	Rpt. 4b
ADMIN	25-7-60
CD	Survey held at Gdynia
ED	
DEPT	

Received London **31 AUG 1960** Port **Gdańsk** No. **F.E.M.022**
In shops
No. of visits On vessel **24** First date **14-12-59** Last date **24-6-60**

FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name **"CHOCHLIK"** Gross tons **1006**
Owners **Polish Government** Managers **Polish Steamship Co.** Port of Registry **Szczecin**
Hull built at **Gdynia** By **Stocznia im. Komuny Paryskiej** Yard No. **B57-4** When **1960 6**
Main Engines made at **Frederikshavn** By **Alpha Diesel A/S. Gdynia** Eng. No. **8575** When **1959- 7**
Gearing made at **—** By **—**
Donkey boilers made at **—** By **—** Blr. Nos. **—** When **—**
Machinery installed at **Gdynia** By **Stocznia im. Komuny Paryskiej** When **1960- 6**
Particulars of restricted service of ship, if limited for classification **None.**
Particulars of vegetable or similar cargo oil notation, if required **None.**
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 **Dichloro-Difluoro-Methane**
Is the refrigerating machinery compartment isolated from the propelling machinery space? **Yes.** Is the refrigerated cargo installation intended to be classed? **No.**

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 **2 SA 8 Cyl. 290 x 490 mm direct coupled to propeller.**

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

No. of cylinders per engine **8** Dia. of cylinders **—** stroke(s) **2 or 4 stroke cycle** Single or double acting **—**
Maximum approved BHP per engine **960** at **310** 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 **Fresh Water** Pistons **Lubricating 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? **—** 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 **25-2-1959** State barred speed range(s), if imposed **—**

or working propeller **None.** For spare propeller **None.** Is a governor fitted? **Yes.** Is a torsional vibration damper or detuner fitted to the shafting? **NO.**

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 **—**

If shrunk, radial thickness around eyeholes **—** Are dowel pins fitted? **—** Crankshaft material **—** Journals **—** Pins **—** Minimum **—**

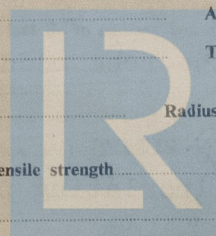
Webbs **—** Tensile strength **—**

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) **—**

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MAIN GAS TURBINES. Name and Type No.

Open or closed cycle. BHP per set at RPM of output shaft

No. of sets of turbines

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 Tensile strength

Material of pinions Tensile strength Material of wheel rims Diameter of pinion journals Wheel shaft

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 155 mm Material Steel

actual Minimum approved tensile strength 49kg/sq.mm. Diameter of screwshaft cone at large end 192 mm Is screwshaft fitted with a continuous liner? No.

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 actual

bearings Thickness between bearings Material of screwshaft Steel Minimum approved tensile strength 53.3k

Is an approved oil gland fitted? Yes. If so, state type Shaft line arrgmt. Length of bearing next to and supporting propeller 810 mm

Material of bearing White metal 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 2044 mm Pitch 1455 mm Built up or solid Sold Total developed surface 2.02m²

No. of blades 4 Blade thickness at top of root fillet 70mm Blade material Bronze Moment of inertia of dry propeller

If propeller is of special design, state type No. Is propeller of reversible pitch type? No. If so, is it of approved design?

State method of control Material of spare propeller Steel Moment of inertia

AIR COMPRESSORS & RECEIVERS. No. of main engine driven compressors per engine 1 Can they be declutched? No.

No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) 1-55m³/Hr, Electric driven.

Port Aft side: Hamburg. No.59/141? A, B, C, D. Ford Main. 800 L. ABG 56

No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) Aft Main 800 L. ABG 66

Stbd Aux. (Ford) 60L. KLN C 59 426

Port Aux. (Ford) 60L. KLN C 59 427

How are receivers first charged? Manual operated air Maximum working pressure of starting air system 30 Kg/cm² Are the safety devices

accordance with the Rules? Yes. Has the starting of the main engines been tested and found satisfactory? Yes.

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

OIL FUEL TANKS. No. and position of oil fuel settling or service tanks not forming part of hull structure 3. ; 1 P.S. engine room top.

1 Port Aft engine room middle, 1 Stbd Aft engine room middle

MAIN ENGINE DRIVEN PUMPS (No. and Purpose) 1 Lubricating oil pump, 1 Fresh water circulating pump,

1 Salt water circulating pump, 1 Bilge pump.

INDEPENDENT PUMPS Name below essential pumps, state position and how driven. Give capacity of bilge pumps.	SUCTION										DELIVERY				
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel	Fresh Water Cooling	Sea	Feed Tanks	Lub. Oil	Emergency Bilge	Boiler Feed	Salt Water Cooling	Fresh Water Cooling	Oil Fuel Tanks	Fire Main	Lub. Oil
Bilge.	X	X	X	X		X			X				X		X
Ballast.	X	X	X	X		X			X				X		X
Fire.					X	X					X	X		X	
Main F.W. circulating					X	X					X	X		X	
Main L.O. circulating								X						X	X
Fuel oil transfer.				X									X		
All pumps electric driven.															

BILGE SUCTIONS. No. and size in each hold, deep tank or pump room No. 1 Hold. 2 at 65mm P & S, No.2 Hold 2 at 65 mm P.&S.

No. and size connected to main bilge line in main engine room 1 at 80mm, 2 at 65 mm In tunnel -

In aux. engine room Size and position of direct bilge suction in machinery spaces 1 at 80mm Stbd Aft.

Size and position of emergency bilge suction in machinery spaces 1 at 100 mm Stbd For'd

Is the bilge or ballast system fitted with means for separating oily water on the overboard discharge side? Yes. 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	RHS 518 D	Stddutsche	Hamburg 59/1292	45KW Electric Generator
Centre	RHS 518 D	Bremse A.G.	Ham 59/1295	" " "
Stbd	RHS 518 D	Munich	Ham 59/1291	" " "

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. 45 KW generator

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) 2 ram hydraulic operated by one Hele

Shaw type pump driven by electric motor controlled by telemotor. Alternative control from Poop. Hand pumps on bridge and in steering flat.

Have the Rule Requirements for fire extinguishing arrangements been complied with? Yes. Brief description of arrangements 3 Hoses with 3 jets and 3 spray nozzles. 3- 10 Ltr. portable foam & 3- 6Kg CO₂ extinguishers.

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-

ower sea trials of main engines 6-6-60, 6 Hrs. 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 main and auxiliary machinery has been installed under Special Survey in accordance with the Rules, approved plans, and Secretary's letters. The material and workmanship are good. The machinery installation has been tested under working conditions and found satisfactory. The installation is eligible in our opinion to be classed with the Society with records

+ L M C 6-60

TS OG 6-60 and notation "strengthened for navigation in ice".

N. Dienes G. Manson

N. Dienes & G. Manson
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 (Working). Gdańsk. CTG 260

OTHER IMPORTANT ITEMS Steering Machinery Gdańsk 158, Windlass & independent pumps.

Is the installation a duplicate of a previous case? Yes. If so, state name of vessel "SKIERKA" B57/3 (Still building)

Date of approval of plans for crankshaft Straight shafting 26-11-58 Gearing Clutch
29-1-60
Separate oil fuel tanks Pumping arrangements 29-1-60 Oil fuel arrangements 29-1-60

Cargo oil pumping arrangements Air receivers Donkey boilers

Dates of examination of principal parts:—

Fitting of stern tube 14-12-59 Fitting of propeller 29-12-59 Completion of sea connections 30-12-59 Alignment of crankshaft in main bearings
Engine chocks & bolts 28-3-60 Alignment of gearing — Alignment of straight shafting 28-3-60 Testing of pumping arrangements 3-6
6-5-60 — 6-6-60 6-6-60
Oil fuel lines Donkey boiler supports Steering machinery Windlass
FRIDAY 28 OCT 1960 Special Survey Fee £ 80 & zł 4.200.

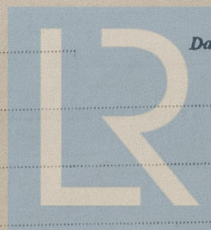
Date of Committee

Decision

See Rpt. 1.

Expenses zł. 600.—

Date when A/c rendered 30.6.1960



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