

Rpt. 4b

21. Jul. 1962

01784

Date of writing report 15. 6. 1962

Received London

Port of Vienna

No. C.

Survey held at

No. of visits In shops 42 On vessel 12

First date 22. 6. 61 21. 2. 62

Last date 26. 5. 62 13. 6. 62

# FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name MV "ABO EGELA" Gross tons 119.50

Owners Port & Lighthouses Admin, Managers -- Port of Registry Alexandria

Hull built at Budapest By Gheorghiu Dej Shipyard Yard No. 1917 Year 62 Month 2-5

Main Engines made at Budapest By Lang Gépgyár Eng. No. 4054-61/III When 62 1-4

Gearing made at -- By -- Gear No. -- When --

Aux./donkey boilers made at -- By -- Blr. Nos. -- When --

Machinery installed at Budapest By Gheorghiu Dej Shipyard When 62 4-5

Particulars of restricted service of ship, if limited for classification --

Particulars of vegetable or similar cargo oil notation, if required --

If ship is to be classed for navigation in ice, state whether Class 1, 2 or 3 -- Is ship an oil tanker? no

Is refrigerating machinery fitted? no 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? --

*Machy only*

F.E. FROM ACCTS.	25 JUN 1962
F.E. FROM ADMIN/F	26/6
PLANS RECD.	
CERTS. RECD.	21/6
TO RPIS. DEPT.	

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 should 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 all other relevant particulars must be given and the port and report number should be stated.

No. of main engines 1 No. of propellers 1 Brief description of propulsion system 8 cyl. 4 SC SA Supercharged Diesel Engine

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Lang Diesel Engine Type 8 LD 315 RFT

No. of cylinders per engine 8 Dia. of cylinders 315 mm stroke(s) 450 mm 2 or 4 stroke cycle 4 Single or double acting single

Maximum BHP per engine approved for this installation 865 at 350 RPM of engine and 350 RPM of propeller.

Corresponding MIP 7.9 Kg/cm<sup>2</sup> (For DA engines give MIP top & bottom) Maximum cylinder pressure 56 Kg/cm<sup>2</sup> Machinery numeral 1917 173

Are the cylinders arranged in Vee or other special formation? no, in line 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? --

TWO AND FOUR STROKE ENGINES. Is the engine supercharged? yes Are the undersides of the pistons arranged as supercharge pumps? no No. of exhaust gas driven blowers per engine 1

No. of supercharge air coolers per engine -- Supercharge air pressure 0.28 Kg/cm<sup>2</sup> Can engine operate without supercharger? yes

No. of valves per cylinder: Fuel 1 Inlet 1 Exhaust 1 Starting 1 Safety 1

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 water (fresh or salt) Pistons lubr. oil Fuel valves -- Overall diameter of piston rod for double acting engines --

Is the rod fitted with a sleeve? no 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 3.6 m<sup>3</sup> No. and total area of explosion relief devices 8/603.2 cm<sup>2</sup>

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? no

Is the engine secured directly to the tank top or to a built-up seating? built up seating How is the engine started? compressed air

Can the engine be reversed? yes If not, how is reversing obtained? --

Has the engine been tested working in the shop? yes How long at full power? 5 hours (27th April 1962)

CRANK & FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 28th Dec. 61 State barred speed range(s), if imposed

for working propeller 100 rpm For spare propeller -- Is a governor fitted? yes Is a torsional vibration damper or detuner fitted to the shafting? yes

Where positioned? on shaft end Type Holset 31" x 5.5" 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) 416 mm Distance between centro lines of side cranks or eccentrics of opposed piston engines --

Crankshaft type: Built, semi-built, solid. (State which) solid

Diameter of journals 185 mm Diameter of crankpins Centre 185 mm Side 185 mm Breadth of webs at mid-throw 300 mm Axial thickness of webs 100 mm

If shrunk, radial thickness around eyeholes -- Are dowel pins fitted? -- Crankshaft material: Journals Forged Steel Approved 80 Kg/mm<sup>2</sup>

Webs Steel Tensile strength --

Diameter of flywheel 1200 mm Weight 1640 Kgs Are balance weights fitted? yes Total weight 0.5 Kg Radius of gyration PD<sup>2</sup> = 1600 Kgm<sup>2</sup>

Diameter of flywheel shaft -- Material -- Minimum approved tensile strength --

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

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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 .....  
 (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. State Port and report No.)

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. Full particulars to be reported on Form 4e.) Port ..... Report No. ....

**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. Flexible "Periflex" coupling rubber segments

Can the main engine be used for purposes other than propulsion when declutched? NO If so, what? .....

**STRAIGHT SHAFTING.** Diameter of thrustshaft 160 mm Material steel C40 Minimum approved tensile strength 55 Kg/mm<sup>2</sup>

Shaft separate or integral with crank or wheel shaft? separate Diameter of intermediate shaft ..... Material .....

Minimum approved tensile strength ..... Diameter of screwshaft cone at large end 160 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 bearings 13 mm Thickness between bearings neoprene coating How is the after end of the liner made watertight in the propeller boss? With rubber packing

Material of screw/tube shaft C 40 Minimum approved tensile strength 55Kg/mm<sup>2</sup> Is an approved oil gland fitted? ..... If so, state type .....

Length of bearing next to and supporting propeller 710 mm Material of bearing Pockwood 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.** If of special design, state type Propeller with Kort ring Is it of reversible pitch type? NO

If so, is it of approved design? ..... State method of control .....

Propeller	Diameter mm	Pitch mm	Built or solid	Total developed surface m <sup>2</sup>	No. of blades	Blade thickness at top of root fillet mm	Blade material	Tensile strength Kg/mm <sup>2</sup>	Design moment of inertia of propeller (dy) Kg/cm <sup>4</sup>	For Class 1 or 2 ice strengthening only			
										Blade thickness at 25% radius mm	Blade thickness at tip mm	Length of blade section at 25% radius mm	Rake of blade
Working	1800	1343	solid	0.61	4	74	Bronze	51.7	376				
Spare													

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

No. of independently driven air compressors. (State capacity, prime mover, position in ship, and Port and No. of certificate) 1 electrically driven compressor

in engine room of 530 ltrs/min capacity, Vienna Certificate No. C. 01801

No. of starting air receivers. (Main and Aux. State capacity of each, position in ship and Port and No. of Certificate) 2 main starting air receivers,

450 ltrs each in engine room Vienna Certificate No. C. 01801 01819 2aux 01796

How are receivers first charged? by compressor Maximum working pressure of starting air system 35 Kg/cm<sup>2</sup> Are the safety devices in 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 2 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 1 Diesel Oil Tank Portside

aft in engine room

**MAIN ENGINE DRIVEN PUMPS** (No. and Purpose) 1 Freshwater pump, 1 bilgewater pump

2 Lubricating oil pumps

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	Overboard
SSA 60+Ev Electrically driven, 30m <sup>3</sup> /h Eng. Room	X	X	X			X										X
SSA 125+Ev Electrically driven, 200m <sup>3</sup> /h Eng. Room		X				X							X			
SSA 125+Ev Electrically driven, 200m <sup>3</sup> /h Eng. Room		X				X							X			
GNVA 125 Electrically driven, 90m <sup>3</sup> /h Eng. Room					X	X				X	X					
GNVA 125 Electrically driven, 90m <sup>3</sup> /h Eng. Room					X	X				X	X					
HGF 50/8 Electrically driven 12 m <sup>3</sup> /h Eng. Room							X					X				
HGF 50/8 Electrically driven 12 m <sup>3</sup> /h Eng. Room								X						X		

**BILGE SUCTIONS.** No. and size in each hold, deep tank or pump room 2 @ 54mm

accommodation in forecabin, 1 in the chain locker, 2 in the forepeak, 1 in afterpeak, acc. 49 mm Ø

No. and size connected to main bilge line in main engine room 4, 58.4 mm Ø In tunnel 1.49 mm Ø

In aux. engine room ..... 49 mm Ø Size and position of direct bilge suction in machinery spaces

1 between frames No. 17 and 18 Size and position of emergency bilge suction in machinery spaces 1 at the bulkhead No. 31, 125 mm Ø

Is the bilge or ballast system fitted with means for separating oily water on the overboard discharge side? NO Do the piping arrangements comply with the Rules including special requirements for oil tankers, ships carrying cargo oil or classed for navigation in ice Class 1, 2 or 3? (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 Engine Room	Diesel Engine	Nehezszerzám gépgyár	VNA Rpt. C.01786	DC-Generator 75KW No. 347198
Starb. Engine Room	Diesel Engine	do.	do.	do. No. 347197
Port Engine Room	Diesel Engine	Kismotor és Gépgyár	VNA Rpt. C.01785	DC-Generator 15KW No. 41456

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 One alternator, 132 HP

Is an electric generator driven by Main Engine? NO

**STEAM INSTALLATION.** No. of aux./donkey boilers burning oil fuel ..... 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 aux./donkey boilers

Is a superheater fitted? ..... Are these boilers also heated by exhaust gas? ..... No. of aux./donkey boilers heated by exhaust gas only? ..... W.P. ....

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 including particulars of alternative means of steering) .....

2 Hydraulic screw pumps driven by 2 DC motors, Emergency drive by lever actuated by capstan

Have the Rule Requirements for fire extinguishing arrangements been complied with? yes Brief description of arrangements 2 water guns with six joints to hoses and to foam extinguisher, portable CO<sub>2</sub> 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 power sea trials of main engines 11th and 12th June, 1962, 6 hours full power

Does this machinery installation contain any features of a novel or experimental nature? (Give particulars) none

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.)

MAGYAR HAJÓ- ÉS DARUGYÁR Angyalfeleki Győrféregcső Register  
**LÁNG ENGINEERING WORKS**  
 TECHNICAL CONTROL DEPT.  
 Műszaki ellenőrzési osztály

0337 3/2

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 main and auxiliary machinery of this vessel has been constructed under special survey in accordance with the requirements of the Society's Rules, the approved plans and the Secretary's letters.

All important forgings and steel castings were made, tested and inspected in accordance with the Society's Rules.

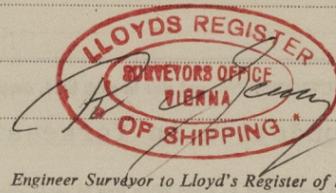
The materials and workmanship are satisfactory.

The machinery has been installed aboard the vessel in an efficient manner and found satisfactory when tested at sea under full load conditions.

In my opinion, the machinery of the vessel is eligible to be classed with the following notations in the Register Book:

+IMC 6-62 Diesel Engine  
Screwshaft TS.

Note: Machinery not be operated below 100 rpm continuously



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 Connecting Rods, Vienna Cert. No. 01323

LLOYDS VNA 14928 RC 14.2.62  
14930

CRANKSHAFT OR ROTORSHAFT LLOYDS DSF H.S. 5541 7.11.61, Düsseldorf Certificate No. 61/2039

FLYWHEEL SHAFT --

THRUSTSHAFT LLOYDS VNA 14993 RC 27.3.62, Vienna Certificate No. 01337

GEARING --

INTERMEDIATE SHAFTS --

SCREW ~~INTERMEDIATE~~ SHAFTS LLOYDS VNA 14981 RC 28.3.62, Vienna Certificate No. 01291

PROPELLERS LLOYDS ROT J.W. No. 424, 17.8.61, Rotterdam Certificate No. 61/2904

OTHER IMPORTANT ITEMS, Supercharger, Winterthur Certificate No. C.11410

Is the installation a duplicate of a previous case? yes If so, state name of vessel Shahm, Batal el Salam (Yard Nos. 1915)

Date of approval of plans for crankshaft 31.1.61 Straight shafting 31.1.61 Gearing -- Clutch --

Separate oil fuel tanks -- Pumping arrangements 13.9.61, 14.2.62 Oil fuel arrangements 13.9.61, 14.2.62

Cargo oil pumping arrangements -- Air receivers 30.12.60 Aux./donkey boilers --

Dates of examination of principal parts:-

Fitting of stern tube 27.4.62 Fitting of propeller 28.4.62 Completion of sea connections 29.4.62 Alignment of crankshaft in main bearings 16.2.62

Engine chocks & bolts 29.3.62 Alignment of gearing -- Alignment of straight shafting 26.5.62 Testing of pumping arrangements 12.6.62

Oil fuel lines 12.6.62 Donkey boiler supports -- Steering machinery 12.6.62 Windlass 12.6.62

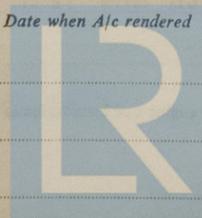
Date of Committee FRIDAY - 7 SEP 1962

Special Survey Fee

Decision +LMCES  
TS } 6.62

Expenses

Date when A/c rendered



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