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**FINAL REPORT**  
**MUSSALA EOOD, Samokov -**  
**Audit and Analysis**  
[ 6 pages and 3 supplements ]

**Project symbols**

**DG/BUL/93/002 Assistance to the Transition to Market  
Economy**

**UNIDO Contract:**

**No. 94/074P Assistance to the Transition to Market  
Economy, Purchase Order No. 15-4-1074P**

**National Contractor:**

**BULGARIAN INDUSTRIAL ASSOCIATION (BIA)**  
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## **ABSTRACT**

The present report bears upon the implementation of the requirements at Stage Two of Contract No. 94/074P, and contains the results of the study and a survey of the company MUSSALA EOOD, together with proposals for technical assistance.

**The aims of the report are:**

- to identify the main problems relating to the company's activities and to formulate priorities as a function of the company's short-term development objectives under the new market conditions;
- to identify the areas for technical assistance, in accordance with the market conditions;
- to link the points of "intersection" between the company needs and the possibilities of UNIDO under Project DG/BUL/93/002, Annex B, for the purpose of providing technical assistance.

**The object of the report is the company MUSSALA EOOD (Samokov)**

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**Contact person:** Dinko Shishkov, Manager, tel.: (+359 721) 26 812.

**Object of activities:** Production of primary and secondary chemical power supply systems.

**Ownership:** State-owned enterprise (SOE).

**The SOE is supervised by:** The Ministry of Industry. It is managed as a one-man limited liability company by the manager, in compliance with the provisions of the legislation in force in the country.

**Privatization:** No procedure has been opened for privatization, and no potential buyers have been identified so far.

**To meet these objectives the team carried out the following tasks:**

- additional information was gathered, and the state of affairs was verified "in the field" by means of interviews;
- problem areas (weaknesses) and advantages (strengths) of the company were identified;
- "the matrix approach" was applied in determining priorities with a view to finding solutions to existing problems;
- the areas of extending technical assistance were identified



**1. Personnel:** Total number of employees: 263 (108 men, and 155 women).

Men per women ratio: 1 : 1.4.

Administrative personnel: 51 people of whom 6 security, social workers, traders.

Workers, including maintenance: 163 people.

Administration/workers' ratio: 1:4.

Distribution by education:

higher - 17; secondary, vocational incl. - 172; primary - 74.

**2. Organizational Structure:** The company was established in 1961. It specializes in the production of various types of primary and secondary chemical power supply systems (batteries). In 1992, the enterprise was registered as a one-man limited liability company under the Ministry of Industry. Supplement No. 1 shows the block-diagramme of the company management.

**3. Infrastructure:** The company is located on one site within the town area, with a good road leading to it. It consists of several premises. A small number of these are old and are mainly used as warehouses. There is a multistory new building that will be offered for rent. The production halls are vast, with a lot of unused space, and are comparatively well preserved. Good possibilities exist for expansion of the production lines within the limits of the existing buildings.

The company's fixed assets amount to 36.1 million BGL. The structural distribution of the fixed assets is: buildings - 69.5%; machines and facilities - 22.2%; transport vehicles - 0.7%; miscellaneous - 7.6%. The buildings' physical depreciation according to the books is approximately 8.6%; that of the transport vehicles - 19.76%.

#### 4. Products

**4.1. List of Products:** The company has specialized in the manufacture of:

- nickel-cadmium hermetic disk and cylindrical batteries;
- nickel-cadmium prismatic storage batteries;
- silver-zinc alkaline batteries;
- zinc-air cells;
- water-proof batteries;
- lithium cells and batteries;
- power units;
- charging units;
- others.

The air electrodes of the zinc-air cells are exported to Germany as semi-finished products. The technology of their production is designed by the Bulgarian Academy of Sciences, is patent protected, and corresponds to ecological standards (mercury-free). The power units are in low demand.

**4.2. Capacity:** The used capacity of the factory is approximately 50%. Work is in one-shift. The company has universal machines with work load not exceeding 35%-40%.



**4.3. Quality Standards:** The products correspond to the Bulgarian State Standards (BDS) and to GOST (Russian) standards. Some products match the standards of the International Electric Committee (IEC). Other products match requirements by production sectors.

**4.4. Sales:** Sales are negotiated directly or through agents. There is a sharp decrease in sales. The company's major client - the Chief Engineering Administration - has stopped purchases. Prior to 1991, city factories used to be the company's permanent clients (Samokov, Gotse Delchev, Sofia); now they purchase minimal amounts.

**4.5. Trade Mark and Packings:** The company uses its own trade mark on patent protected products only. All the products bear the company label and packing. Packings are Bulgarian.

**4.6. Acceptability in the Market:** Some products (the water-proof batteries, the zinc-air cells and batteries, the lithium cells and some nickel-cadmium batteries) are well accepted in the foreign markets.

The "air electrodes" of the zinc-air cells are well-received as semi-finished products.

**4.7. Adaptability of the Products:** The quality of some products is competitive to international standards but fails the requirements of design and popularity.

**4.8. Flexibility of the Products Towards the Market Needs:** Prices are lower than e. g. those of the VARTA products.

**4.9. Automation of the Processes:** Automation has a relatively low degree of automation.

**4.10. Production List Availability:** Possibilities exist for expanding the products list following the accomplishment of comprehensive market studies.

## **5. Production**

**5.1. Production Technological Chart:** There are seven types of specialized production & maintenance units:

- battery production - 2 workshops;
- pre-processing - 3 workshops;
- toolroom - 1 workshop;
- "Household Goods" - 1 workshop.

The production technological chart is almost entirely closed, with a very small number of cooperated productions.

The technological chart is specific for each unit in the part bearing on the chemical processing. In its remaining part it comprises the following operations: processing of parts; assembly; testing; packing.

**5.2. Machinery and Facilities:** The company is equipped with a large number of universal multifunctional machinery and facilities, mainly Russian, imported, and Bulgarian. Their physical depreciation amounts to approximately 17.51%.

The company has purification station for the waste waters.



**5.3. Flexibility of the Production:** Good flexibility exists, as well as possibilities for independent design and introduction of new products. The company's present financial situation does not permit such expansion for the time being. The existing equipment allows for the production of a large range of type designs.

**5.4. Working Places:** The company has cut down the number of working places twice in the course of the last few years due to the decline in demand.

**5.5. Equipment Maintenance:** There are specialized equipment maintenance units. The tools and instruments are manufactured by the company.

**5.6. Quality Control (QC):** The company has specialized laboratory equipment and specialists for the needs of testing and quality control of the products and their correspondence to the required standards. The technological discipline is very high which is a guarantee of high quality.

**5.7. Environmental Protection:** Since 1990 to the present the company has not been fined for pollution of the environment. However, regardless of the availability of a purification facility, the danger exists of surface water's pollution by chemical's production wastes.

## **6. Procurement**

**6.1. Raw Materials:** Some raw materials are local (cadmium oxide, pickled sheet, plastics, silver nitrate). Suppliers are local, and no alternatives exist in this area. Other raw materials (nickel hydroxide, nickel sulfate and nickel mesh) are imported from Germany and Russia.

There are no cooperated supplies. The products are fully completed by the enterprise.

**6.2. Spare Parts Supply:** The company has motor vehicles fleet which is too large for its needs and for the present volume of spare parts and tool's production. A large number of the vehicles are rented.

**6.3. Packing Materials:** They are made in Bulgaria.

## **7. Sale**

**7.1. Marketing:** The company has a comparatively good information about the pricing, quality and markets of similar products. The information is piecemeal, and is gathered by individual staff members. It is not analyzed or systematized. There is a Sale Department whose functions do not comply with the requirements for this type of activities. No studies have been made for the realization of the company products on the foreign markets.

**7.2. Trade Channels:** In the past the enterprise used to realize all of its products through State-owned enterprises and firms. Some of these no longer exist; others have been reorganized and have assumed new functions that do not cover the sale of the MUSSALA products. The company has remained "isolated" in the new conditions, and finds it very difficult to proceed.



The company uses agents from Greece for the realization of the water-proof batteries.

**7.3. Promotion of Products:** The company has promotional folders in Bulgarian and in English. It advertises its products in the mass media and on the radio.

**7.4. Realized Export:** Some types of batteries and cells are exported. One of the water-proof battery types is exported with the agent's label.

**7.5. Contacts with Foreign Companies:** In 1985, the company had business contacts with the Israeli company TARIDAN with a view to obtaining assistance for its technological equipment, with good prospects for success.

Business contacts with the CAFT company (France) have also been accomplished, aiming at a future cooperation. The French company is one of the leading manufacturers in this branch.

Attempts have been made to establish business contacts with the company's largest competitor on both the domestic and the foreign market - the VARTA company, with a view to cooperation of production.

**8. Financial Situation:** Since 1991, the company has been working at a loss that is steadily rising. In 1993 the loss amounted to 8,782 thousand BGL, and had the following structure (activities & expenses):

		per 1,000 BGL profit
book losses:	-8,782 tho. BGL	-58.6 BGL
from production activity:	-2,595 tho. BGL	-17.7 BGL
interest rates and other financial operations:	-7,097 tho. BGL	-47.4 BGL
profit from other activities:	+910 tho. BGL	+6.1 BGL

The company has long-term credits to the amount of 4,000 thousand BGL; the debt is overdue and the company cannot repay it. Short-term credits amount to 3,250 thousand BGL, also overdue.

Payables: 14,268 thousand BGL distributed as follows: 50% - overdue interest rates; 9% - to suppliers; 16% - to the State; 25% - temporary financial assistance received.

The company has material stocks and unrealized production in stock for about 9,500 million BGL. Purchase receivables amount to 2,737 thousand BGL. The layout of expenses is shown in Supplement No. 2.



## 9. PROBLEMS AND CONSTRAINTS UNDER THE CHANGED ECONOMIC CONDITIONS

The company has no promotion and development strategy as a whole, either in the short or in the long term. Such a strategy is essential in the new conditions. Prior to 1989, the production of the enterprise was entirely planned and realized "from above". Enormous shipments used to be sent to a narrow number of clients who no longer exist.

### 9.1. Relating to the Structure of Production

#### Strengths:

- some of the products (water-proof batteries, zinc-air cells and batteries, lithium cells) match international standards, and have higher qualities;
- the products' present prices are considerably lower as compared to international prices;
- some products (the zinc-air cells) are ecologically pure - they contain no mercury.

#### Weaknesses:

- the products' design and labels are outdated;
- no possibilities have been found to renovate the products list.

### 9.2. Relating to the Technological Level

#### Strengths:

- multifunctional equipment which permits the manufacturing of a large range of products or for cooperated products;
- the company has spacious buildings (halls);
- the company staff is qualified and well-disciplined;
- QC is well organized and implemented.

#### Weaknesses:

- little automation, and a large percentage of manual labour;
- no modern technologies are used (the nickel-cadmium batteries are manufactured with an outdated press technology);
- no connections with foreign companies have been established

### 9.3. Relating to the Financial Situation

#### Strengths:

- the company has available a satisfactory liquidity against its fixed assets.

#### Weaknesses:

- the company is in a very difficult financial situation;
- it has long-term credits which it cannot service;
- the company finds it difficult to repay short-term working capital credits;
- the company is heavily indebted;
- it has large amounts of products in stock and maintains high receivables from its clients.





#### 9.4. Relating to the Access to Domestic and Foreign Markets

##### Strengths:

- efforts are being made to learn more about existing competitors and about the advantages of their products;
- there is demand in some of the products (miners' lamps) at the markets of some neighboring countries.

##### Weaknesses:

- the company has no "face" of its own as a producer in the international markets;
- no sufficient market studies have been made about demands in some of the products that the company can manufacture using the existent equipment and labour skills.

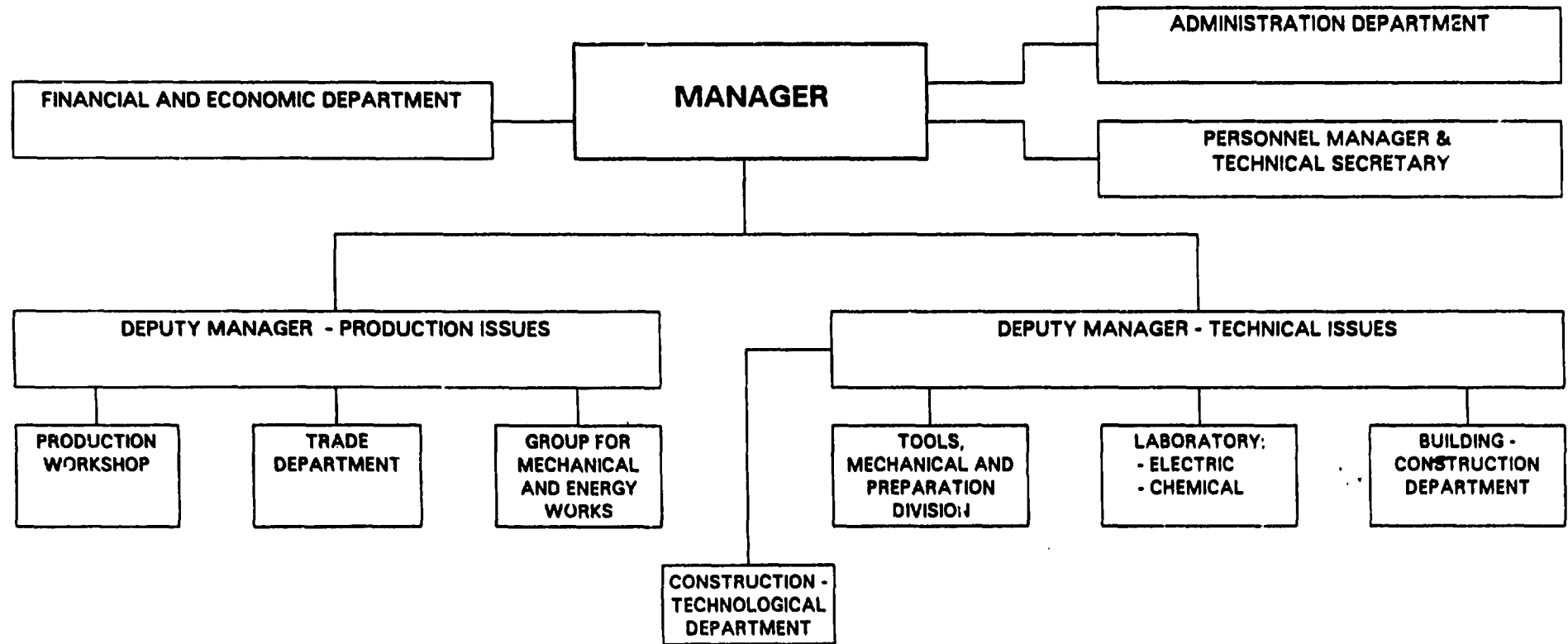
#### TERMINAL SECTION

It is very important for the company to show "flexibility" in its adaptation to the new conditions by using effectively all available resources: equipment, buildings, experience, qualification, self-control, patents, etc., and to find "market segments" for its innovation products. Taking these factors into consideration, the experts' team, jointly with the company management, proposes that TA be extended in the following areas:

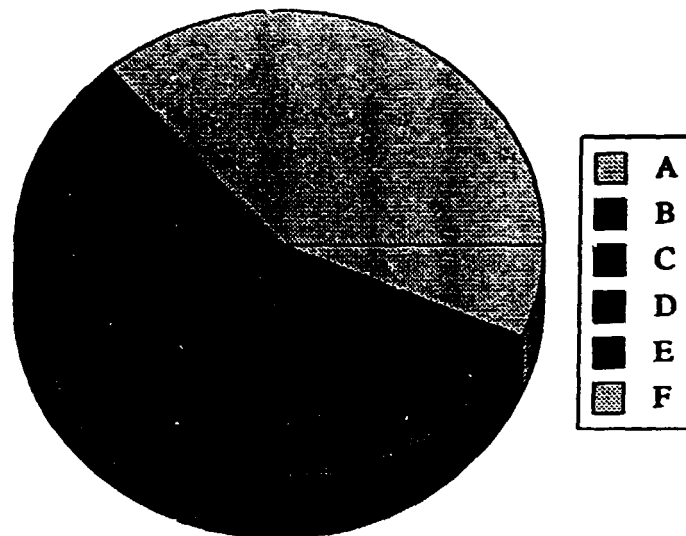
- *marketing and functions of the Sale Department;*
- *technical know-how and technologies, and/or possibilities for cooperation with leading producer companies in this sector;*
- *general management issues and strategic planning.*



### ORGANIZATIONAL STRUCTURE



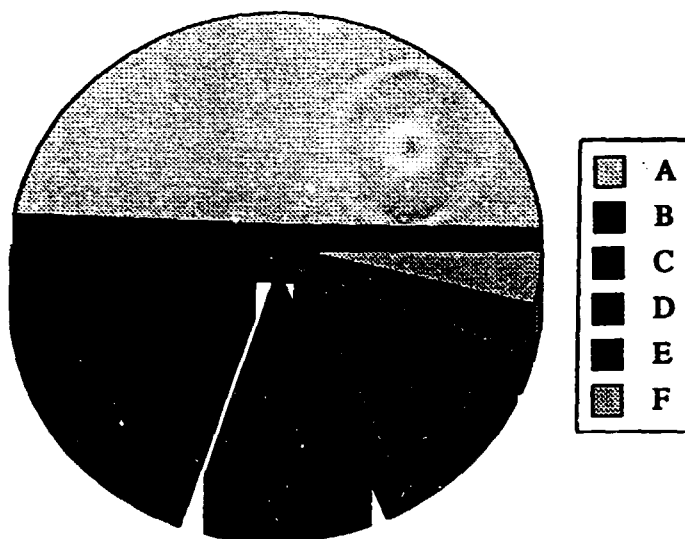
**PRODUCTION EXPENSES' STRUCTURE**



	Types of the expenses	tho. BGL	Parts of expenses in percent
<b>A</b>	Raw materials	5,746	36.4
<b>B</b>	External services	465	2.9
<b>C</b>	Salaries	5,729	36.2
<b>D</b>	Social Insurance	2,016	12.7
<b>E</b>	Depreciation of fixed assets	869	5.5
<b>F</b>	Other expenses	1,004	6.3
	<b>TOTAL</b>	<b>15,829</b>	<b>100</b>



TOTAL EXPENSES' STRUCTURE



	Types of the expenses	tho. BGE	Parts of expenses in percent
A	Production Expenses	15,829	66.6
B	Credits' Interests	7,113	29.9
C	- for working capital	3,190	13.4
D	- for investment' credit	3,923	16.5
E	Other Expenses	826	3.5
F	Taxes	-	-
	TOTAL	23,768	100



**MUSSALA FOOD, (Samokov)**

## ***Job Description***

**TA: Marketing and the function of sales department**

### **1. Theoretical activities:**

A brief presentation of the latest methods and approaches to be applied in this field to the managing staff of the company including the specialized marketing unit. To be carried out simultaneously with the practical assistance.

### **2. Practical activities:**

To elaborate a product-marketing strategy for the company. The following items should be emphasized:

- detailed marketing of foreign markets including these in neighbour-countries in order to find out market niches for MUSSALA's products;
- organizing a distribution network for different markets and products;
- study of the competitors' products i.e. prices, design; analysis and conclusions;
- ways of promoting products;
- assistance for establishing contacts with customers for sale of patent-protected products (dry batteries);
- giving an attractive look of the products for sale;
- marketing of foreign markets especially for miner's lamps;
- analysis of the causes due to which dry batteries are not sold except for the patent protected electrode.

### **3. Resources' procurement of the strategy.**

Making a list of the tasks according to the resources necessary for their production with priority of those which do not require any resources and those which require some.



MUSSALA EOOD, (Samokov)

## ***Job Description***

**TA: Foreign Investment and Technologies**

**1. Analysis of the equipment available in the production units in order to find out the production opportunities for other civil goods.**

This would be done by the follow steps:

- control of the available equipment on the production spots;
- production organization control (including schedule, production sequence, quality, etc.);
- opportunities created by the research and development activities as well as the constructor activities of the company for creating innovative products;
- comparison of the market study results and existing technical conditions.

**2. Elaborating new production strategy of the company which should emphasize on the following: (all or some of them, according to the results of item 1):**

- new products of major world companies similar to the company's products;
- new products created on the basis of existing scientific and constructor's possibilities;
- opportunities for co-production with world leading companies in this field.



MUSSALA EOOD, (Samokov)

## ***Job Description***

**TA: General Management issues**

1. Analysis of the existing management structure in the context of the market system development. Advantages and faults. To be carried out by the managing staff of the company and the consultant.

2. Actions to overcome the weaknesses. To be identified by the consultant and work with a team of the enterprise' experts under his supervision.

An idea about how to stabilize the company should be the result of this assistance.

3. To elaborate a business-strategy for MUSSALA. The following stages should be passed:

- financial;
- relations with the suppliers;
- development and managing the personnel;
- ecological.

**Note:** The product-market and technological strategies are elaborated in details and comprehensively under consultants' instructions. They exist in the form of plans for implementation. The other strategies are able to outline only the main actions necessary for their fulfilment.

4. To elaborate a business-plan for performing the strategy. This is done through a training similar to a situation in the reality - MUSSALA.

In the course of the direct practical consultancy a permanent process for theoretical training on these problems is taking place.

