



COMMAND STRUCTURES OF MILITARY ENGINEERING BRANCH, FROM THE ROMANIAN ARMY, IN THE PERIOD 1941-1946

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The situation during the years 1941-1946 was particularly complex, a period in which the Romanian Army participated in military operations, both in the Eastern campaign against the Russian Army and in the Western campaign against the German Army, which was allied to us for a time. For the leadership and coordination of military actions, the existing Romanian commands, or those established according to current needs, cooperated closely with both the German and as well as the Russian ones from the moment we turned our weapons against the Germans. During both campaigns, the structures within the Romanian commands were some newly established and others organized and reorganized according to the needs required by the current situation. Among these structures, there are those of military engineering, who led and coordinated all specific activities. In this study I aimed to identify the organization and role of military engineering structures, within the Romanian commands, in leading and coordinating engineering actions during 1941-1946, in order to make later, in another study, a comparative analysis with the military engineering structures of the Romanian Army existing at this date.

Keywords: command and control structures; engineer branch; pionniers; fortifications; commanders.

The difficult situation of the country and the deeper involvement of Romania in the military campaign in the East and later in the West had special consequences in terms of organizing the Army, structures of command and control, as well as troops. During the period when the Romanian Army participated in the war, during the two campaigns, the military leadership was ensured, alternately and simultaneously by the General Headquarters and the General Staff, in accordance with the evolution and operational requirements, with the relations of collaboration, cooperation, and subordination to German and Soviet commands. Various factors determined the reorganization, organization, and implicitly the attributions of these structures, especially of the services, sections, and offices in the composition, during the whole duration of the participation in the Second World Conflagration¹. Among these, we also identify the military engineering command structures, which are the subject of our study, but we will also refer to other military engineering command structures, permanent or temporary, that existed at that time.

The reason for elaborating this study was to identify the military engineering structures within the Romanian Army commands, during

1941-1946, their organization, their attributions, and the role they played in leading and coordinating the engineering troops. To identify the military engineering structures within the commands of the Romanian Army, I studied a series of documents in the archives and also a series of general and special military works.

In this study I want to make a detailed analysis of the military engineering command structures that the Romanian Army had, then collate data and information with others already emerged from other studies; a comparative analysis will be made with the command structures of military engineering today in the organization of our army, as well as in the organization of NATO commands or the national armies of some NATO member states. Subsequently, after performing the comparative analysis of all the military engineering command structures, both Romanian and foreign, concrete proposals will be made for the reorganization and resizing of structural military engineering within the Romanian Army commands.

Organization of command structures of the military engineering branch at the beginning of 1941

On April 1st, 1941, according to the battle order² officials, the command structures of the military engineering branch and also the other

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structures within the branch were organized and subordinated as follows: at the Ministry of National Defence, within the State Undersecretariat for the Army, there were as superior command structures the *Superior Directorate of Military Engineering* and the *Directorate of the fortifications*. Within the State Undersecretariat of Air we identify the *Directorate of Aeronautical Engineering*, and within the State Undersecretariat of the Navy, *the Engineering and Signal Service*.

As a force structures, there were six pioneer regiments, a pioneer guard regiment, and a battalion of motorized military engineering in the Army Corps and Army Divisions. Within the mountain corps were four battalions of mountain pioneers, and in the organization of the two brigades of fortifications, we find two battalions of military engineering fortifications.

Within the Air Force (Aeronautics), we identify the Aeronautical Engineering Regiment with the Aeronautical Engineering Training Center.

Within the Royal Navy, the Danube Division Command is subordinated to the Marine Military Engineering Regiment.

In the coordination of the Superior Directorate of Military Engineering was the Engineering Training Center with subordinate units, the School of Engineering Officers (active and in reserve) with subordinate units, the Military Engineering Arsenal with the Industrial Military High School, Mogoşoaia Central Engineering Materials Depot, Iaşi Engineering Materials Depot, and the Sibiu Military Engineering Materials Warehouse. As troops the 1st, 2nd, 3rd Pioneer Brigades were organized by regiments and battalions, the Railway Brigade was organized by regiments and battalions, and the Signal Brigade was organized by regiments.

According to other sources³, the following engineering structures were included in the land troops on 1 April 1941: *the General Inspectorate of Military Engineering*, the military engineering schools, the training centers, the military engineering arsenal, the military engineering and fortification battalions, and the warehouses of military engineering materials, and for the direct coordination and control of the units of military engineering there were the commands of the brigades of pioneers, signals, and railways, specialties which were organized into independent regiments and battalions.

The pioneer regiments and the mountain pioneer battalions within the pioneer brigades were directly subordinated to the corresponding army corps, respectively to the mixed mountain brigades, so they had double subordination. The pioneer brigades depended directly on the General Inspectorate of Military Engineering. There was also a battalion of moto military engineering and two battalions of pioneer fortifications, recently established, they depending on the 1st Armored Division and, respectively, the 1st and 2nd Fortifications Brigades. The Pontoneers Regiment was subordinated to the 1st Pioneer Brigade.

At the same time, the *General Inspectorate of Military Engineering* have in the organization: one *Staff, Pigeon Service, Studies and Experiments Department, Administration Service, Military Engineering Directorate*, who in turn has the composition: *Office 1 Pioneers, Office 2 Communications, Office 3 Signal, Office 4 Administration, Registry*.

The *Directorate of Fortifications* operated at the General Staff⁴.

All the troops of military engineering had peaceful tasks of mobilization. They had to organize, equip and mobilize the units and subunits of military engineering (pioneers, signals, pontoneers, railways) needed for war large units and land troop units. The Aeronautical Engineering Regiment and the engineering units of the navy (signals, pioneers, underwater weapons, and cars) carried out the mobilization for their own needs.

Following the analysis, it appears that at the beginning of 1941, the military engineering structures within the commands were organized hierarchically, had a complex organization, and contributed to the leadership or coordination of engineer units. Their general attributions consist in leading and evaluating the training activities of the troops, endowing them with specific technique and materials, managing the ammunition, engineering equipment and materials, elaboration of studies, projects, and specialized instructions.

Situation of command structures and troops during the campaign

In the mobilization tables, the 1941 edition, it was recorded how the system of the general management of the war and the armies of operations was to be realized. This system included the General



Staff with its directorates and sections, the general inspectorates of branches, the commands of the large operational and tactical units.

Based on the documents of that time, on April 1, 1941, they were established for the leadership of military engineering troops⁵, the following structures: at the General Headquarters – Echelon I: *Military Engineering Command* and *Signal Command*, consisting of cadres from *the General Inspectorate of Military Engineering* and *the Signal Brigade*; at the General Headquarters – Echelon II: *Direction of Fortifications*; at the State Undersecretariat of the Army: *Military Engineering Directorate (General Inspectorate of Military Engineering)* and *Signal Service*; at the Army Headquarters: *Military Engineering Service*, *Signal Service* and *Radio-gonio Service*, and as commanders of the military engineering and signal services were appointed commanders of the military engineering brigades and, respectively, of the signal regiments; at *Army Headquarters*: *Military Engineering Command*, *Military Engineering Service*, *Signal Command* and *Signal Service*. Commanders of military engineering and signals were the commanders of the military engineering regiments and the senior officers of the brigade and signal regiments, respectively; at the General Headquarters of the Cavalry Corps: *Military Engineering Service* and *Signal Service*; at the infantry division (Bg.Mx.M., Bg.Cv. and other types of independent brigades) no organs of military engineering and signals were provided, the corresponding problems were to be solved by the commanders of the battalions (squadrons) of pioneers or signals, they have the role of chief of branches.

The concentration of the commands of the military engineering and the signals within the Great Headquarters – Echelon I was foreseen for June 14, 1941⁶.

At that time, Brigadier General Barbu Alinescu was employed as *Commander of Military Engineering*, also holding the position of General Subinspector of Military Engineering, and Colonel Vasile Diaconu, from the Signal Brigade, held the position of *Commander of Signals*.

The *Command of the Military Engineering of the Armies of Operations* appears as a necessity during the campaign on the eastern front for the liberation of Bessarabia and Northern Bukovina

from Soviet occupation. In this campaign, the military engineering troops performed numerous specific missions for the benefit of the fighting forces but also of the fighting support forces.

For the leadership and coordination of the troops that carried out these specific missions, on July 11th, 1941, General Grigore Georgescu was appointed by General Antonescu with the order of General Antonescu with number 1911/C, *Commander of the Military Engineering of the Armies of Operations*.⁷

The *Military Engineering Command of the Operational Armies* had the following organization: the *Office of Engineering Studies and Projects*, the *Office of Studies and Signal Projects*, and a secretary-typist.

Colonel Nicolae Cojocaru was appointed *commander of the signals*. The head of the *Office of Engineering Studies and Projects* was Major Gr. N. Popescu, and head of the *Office of Studies and Signal Projects* - Major George Slapciu⁸.

The *Military Engineering Command of the Operational Armies* functioned during the campaign from 1941, until December when the General Staff abolished it, and all its attributions would be taken over by the *Superior Directorate* and the *Military Engineering Command*.

In December 1941, according to the *Ministerial Decision no. 3000* regarding the *Organization and functioning of Ministry of National Defence*, the military engineering command structures had the following structure⁹: at the State Undersecretariat of the Army there were the *Superior Directorate* and the *Military Engineering Command*, organized by the War Preparation Section, the Military Engineering Directorate, the Fortifications Service, the Pigeon Section, the Administrative Service, subordinated to the military engineering commands and troops that did not enter in the composition of large units (Engineering Training Center, Officer and Non-Commissioned Officer Schools, Industrial Military High School, CF (railways) and MLP Art Guard Battalions, Military Engineering Arsenal, Engineering Material Depots); *Directorate of Military Fields and Constructions* with the Studies and Projects Service, the Records Execution Service, the Verifications, Receptions, Exploitation Service and the Administrative Service; at the Undersecretariat of State of the Air Force, under the subordination of the *Superior Aeronautical*



Directorate, was the *Aeronautical Engineering Directorate* with the Signals and Surveillance Section, the Aeronautical Engineering Section, the Infrastructure Section, the Land Section; at the Undersecretariat of State of the Navy we identify the *Military Engineering and Fields Service*.

In addition to the Higher Directorate of Arms, "there was an *Advisory Committee* which gave opinions on matters relating to the tasks of that Directorate"¹⁰.

On April 1, 1942, Major General Gheorghe Zaharescu was appointed to lead the *Superior Directorate* and the *Military Engineering Command*, whose term of office would be until 1946. He had served as Chief of Staff of the 3rd Romanian Army at the declaration of the war¹¹.

Following the experience of war, the General Staff, the *Superior Directorate*, and the *Military Engineering Command* took a series of measures regarding the reorganization of the engineering troops, in accordance with the economic and military potential of the country.

The main measures were aimed at¹²: adapting the leadership, organization, and deployment of engineering troops, arranging for the defence of the territory of Bessarabia and Moldova, and equipping troops with new categories of engineering equipment, equipment, and materials.

a) *Adapting the leadership, organization, and deployment of military engineering troops*¹³ was achieved at all hierarchical levels.

In July 1943, we identified in the organization of the Army, the following leadership structures of the military engineering branch¹⁴: to the Undersecretariat of State of the Army, the *Superior Directorate and Command of Military Engineering*, and the *Directorate of Military Domains and Constructions*; at the State Undersecretariat of the Air Force, subordinated to the *Superior Aeronautical Directorate* was the *Aeronautical Engineering Directorate*, and at the State Undersecretariat of the Navy, the *Engineering and Fields Service*.

As can be seen, the command structures of the military engineering branch at the ministry level did not change between December 1941 and July 1943, but soon changes were made to improve the leadership and coordination of troops¹⁵.

Thus, in the autumn of 1943, some changes took place within the Superior Directorate and the Military Engineering Command. *The General Staff*

has kept its organization since 1941, with the six compartments: *Office 1 Organization-Mobilization*, *Office 2 Intelligence, Research, Work*, *Office 3 Training, Schools, Regulations*, *Office 4 Services, Stewardship, Pigeon Service, and Fortifications Service*, while the *Military Engineering Directorate* is reorganized into seven compartments instead of four, namely: *Office 1 Pioneers*, *Office 2 Communications*, *Office 3 Signals*, *Office 4 Phone* (MND subscription charges), *Office 5 Contracts*, *Office 6 Studies and Experiments* and *Ajutantură*. Thus, we notice the emergence of new structures, namely the Office of Pioneers which separates from communications due to the increasing role of pioneers in operations, and also the Office of Contracts which will deal with endowment issues¹⁶.

Also in the same period, the *Mountain Pioneers Group* was set up, willing to make peace in Braşov, whose main attributions were "instruction and mobilization in the sedentary parts of the mountain pioneers"¹⁷.

Another newly established structure was the *Special Intervention Corps*, commanded by General Virgil Stănescu (former commander of the 4th Romanian Army military engineering in the 1941 campaign). Later, in 1944, it will change its name to the *Construction Corps*, and its units will become detachments (battalions) of constructions.

The Construction Corps had 149 officers, 139 non-commissioned officers, and 3197 troops. The command of the corps had staff with offices: *1 – Organization-Mobilization*, *2 – Studies-Execution*, *3 – Training*, *4 – Services and Organs of Administration and Sanitation*.

The mission of the Construction Corps was to execute, equip, and complete fortification works inside the country. In the initial version of the *Intervention Special Corp*, its mission was to remove the consequences of the bombings by collecting unexploded bombs, defusing and destroying them, demining, removing debris, rebuilding buildings, extinguishing fires¹⁸.

A new measure was the peaceful reorganization of the pioneer and signal regiments.

According to the *Decree-Law on the organization of the Armed Forces* in October 1943¹⁹, military engineering and signals branches as combat branches appear in the land troops.



The military engineering included units of pioneers, guard pioneers, pontooners, railways (hypo or motorized) grouped in regiments, and separate corps battalions.

Signals include wired and wireless signal units, grouped into separate corps regiments and battalions.

On November 14, 1943, by *Ministerial Decision no. 2067/1943*, the *Signal Command* established by *Royal Decree no. 3818/1942*, is subordinated to the General Staff, from the point of view of organization, mobilization, and training, and the other points of view will depend on the Undersecretariat of State of the Army through the Superior Directorate and the Command of Military Engineering²⁰.

b) *Arrangement for the defence of the territory of Moldova and Bessarabia*²¹. After the victory at Stalingrad, Soviet troops successfully continued offensive operations against the Germans and their allies, prompting the Romanian General Staff to focus on organizing to defend the country, and especially the East area.

A special role was played by the *Fortifications Service* within the *Superior Directorate* and the *Military Engineering Command*, which in January-August 1943 led and coordinated important activities, among which we mention:

- rehabilitation of fortification works in the area of Moldova and their extension through the execution of other new works, based on their conception;
- execution of landscaping works against the air landing (against paratroopers) of the districts with important objectives: aerodromes, anti-aircraft artillery batteries, ammunition depots, explosives, weapons, fuels/lubricants, communications nodes, factories, and industrial enterprises with production war, radio stations, etc.

c) *Equipping the troops with new categories of technique, equipment, and engineering materials*²².

At the beginning of the war, the troops of military engineering were properly equipped with rudimentary tools and materials of military engineering, which were produced in our country. But they did not have enough engineering machines, explosive and firing devices, means of research and detection of mines, and means of transmission. At the end of 1941 and during 1942, some of these means and materials will be made available to the troops of military engineering,

by Germany, on the front, in accordance with the protocols established at the beginning of the war. However, military engineering troops continued to face major shortages of engineering, equipment, and materials.

In connection with the endowment of the forces with equipment and materials, the *Superior Directorate* and the *Military Engineering Command* coordinated the research activity for the realization of new means of military engineering and signals. Noteworthy is the invention of the battery phone and the portable phone with lamps by Lieutenant (ret.) Marinescu-Stoiceni.

During 1943-1944, the *Superior Directorate* and the *Engineering Command* intensified the procurement of engineering materials and means from various companies in Germany, Italy, Austria, and Czechoslovakia.

On the evening of August 23, 1944, a coup d'état took place in Bucharest, in which Marshal Antonescu and other members of the Romanian government were arrested. Shortly afterward, King Michael, 1st broadcast on the radio a proclamation stating that Romania was siding with the Allies, turning its weapons against Hitler's Germany. Following this, the Chief of the General Staff issued Order no. 678 563 transmitted to all the Romanian land, air, and naval forces, ordering that "the fight and any act of aggression against the Soviet forces cease"²³. These events represented the change of the political regime in the country and the transition of Romania into the sphere of influence of the former USSR, which dictated the conditions of the armistice, which ended on September 12, 1944.

The consequences of the use of military engineering troops in the eastern campaign

During the period 1941-1944, the numbers of military engineering troops increased steadily, year by year. In June 1941, the engineering troops numbered 72,962 people, of which 57% were operating in the area of operations, reaching in July 1944, reaching several 148,847 people, of which 37% were employed in the area of military actions.

In the actions carried out on the eastern front, as well as in the Iasi-Chisinau operation²⁴, the military engineering branch, like all other combat branches, suffered heavy casualties of thousands of men (dead, missing, prisoners), totaling 624,770 people lost by the operating armies²⁵.



Also during the eastern campaign, the engineering troops suffered heavy material losses. Some units of military engineering lost almost entirely their equipment, materials, and equipment. Following the Iasi-Chisinau operation, the loss of life was very high, units and large units of the Romanian Army lost almost entirely their fighting capability and ceased to exist. The same fate befell the engineering troops, especially the pioneer and signal units²⁶.

For this reason, the General Staff through a series of special orders and instructions would restore a new structure of the Army²⁷, both for the area of operations and inside, taking into account the human and material possibilities of Romania at that time and in accordance with the provisions of the Armistice Convention.

As for the troops of military engineering, the human and material damage was so great that the battalions of divisional pioneers failed to recover. Of the remaining numbers and the new number of recruits from the sedentary parties, the divisions only managed to form a pioneer company. Instead, a corp of pioneers and a battalion of signals remain in the army corps. To successfully form battalions and pioneer companies, it was necessary to transfer staff between units. The reorganization of the military engineering branch was done "on the fly", in a very short time, the deadline for its completion is set for mid-October 1944.²⁸

On November 1, 1944, the *Special Instructions no. 17200* recorded the abolition of the *Superior Directorate* and the *Command of Military Engineering* and the re-establishment of the *General Inspectorate of Military Engineering* which depended on the Undersecretariat of State of the Army²⁹.

The organization of the *General Inspectorate of Military Engineering*³⁰ on 1 December 1944 was as follows: *Directorate of Materials and Engineering Works* headed by a Director, with *Section 1 – Engineering Works*, having *Office 1 – Road Communications*, *Office 2 – Railways*, *Office 3 – Instruction* and *Section 2 – Engineering Materials*, having *Office 1 – Pioneering, Destruction and Military Engineering Materials*, *Office 2 – Studies and Experiences*, *Office 3 – Bridge and Railways Construction Materials*, *Office 4 – Administrative*, *Office 5 – Signal Materials*; *Pioneer Directorate* headed by one director, with two offices, *Office 1 –*

Organization, *Office 2 – Instruction*; *Staff* led by a Chief of Staff, with two offices and a service, *Office 1 – Organization, mobilization, adjudication*, *Office 2 – Instruction, schools, regulations*, *Material Service*; *Signals Department* headed by a director, with five offices, *Office 1 – Organization*, *Office 2 – Instruction*, *Office 3 – Wired broadcasts*, *Office 4 – Radio signals*, *Office 5 – Equipment*; *Stewardship service*.

Subordinated to the *General Inspectorate of Military Engineering* were³¹: *Military Engineering Training Center* with *Center Regiment*; *School of Military Engineering Officers*; *School of Engineering Non-Commissioned Officers*; *1st Pioneer Brigade* organized by regiments; *2nd Pioneer Brigade* organized into regiments and battalions; *3rd Pioneer Brigade* organized by regiments and battalions and also having the *Mountain Pioneers Group*; *Railway Brigade* organized into regiments and battalions; *Construction Corp*; *The Arsenal of Military Engineering*; *Central Warehouse of Engineering Materials*; *Signal Command* subordinated to *School of Signal Officers*; *School NCOs*; regiments and signal battalions.

The pioneer regiments and the *Mountain Hunters Corps* had double subordination: to the command of the *Army Corps* and the *Mountain Corps*, respectively.

According to the *Ministerial Decision no. 2580 of December 2, 1944*, on the organization and functioning of the *Ministry of War*³², subordinated to the *State Secretariat of the Land Army*, was the *General Inspectorate of Military Engineering* which consisted of: the *General Staff*; *Stewardship and sanitary services*; *The Directorate of Military Engineering*; *Directorate of Works*; *Military Engineering Advisory Committee*.

The *Directorate of Military Fields and Constructions*³³ appeared as a separate structure at the level of branches inspectorates and consisted of: *Studies and Projects Service*, *Works Execution Service*, *Barracks Records*, *Technical Checks*, *Reception Service*, *Operation*, *Organization*, *Mobilization*, *Personnel*, *Registry*, and *Administrative Service*.

Changes in reorganization, deployment and structure of military engineering troops

The period after August 23, 1944 and 1945 will bring important transformations for the Romanian



Army but also for the military engineering branch which consisted in the abolition or merger of military units, as a result of the implementation of the Armistice Convention and the introduction of the political apparatus in the Romanian Army structure.

On September 12, 1944, the Armistice Convention was signed³⁴, in Moscow, by the representatives of the Romanian government and the Allied Powers, requesting the reduction of the Romanian Army to a number of 120,000 soldiers for Land Forces, 5,000 for Air Defence, 8,000 for Air, 5,000 for the Navy. These requirements were also provided in the Peace Treaty between Romania and the Allied Powers, signed on February 10, 1947, which consented to Romania's status as a defeated country, although the great powers appreciated its military contribution and economic and financial efforts to shorten the war and defeat Fascist Germany.

In this context, the General Staff passed to the reorganization of the Romanian Army, a fact that naturally extended to the engineering troops, the action being carried out based on Special Instructions no. 70,200 of November 1, 1944³⁵.

The reorganization of the military engineering branch included the dismantling, establishment, transformation, and re-subordination of units and large units.

In the autumn of 1944, a series of pioneer units, railways, and all battalions and detachments especially set up for fortification works were disbanded. The Moto Pioneer Regiment merged with the Military Engineering Training Center, and the Construction Corps and Signal Command were subordinated to the General Inspectorate of Military Engineering³⁶.

In February 1945, all the Training Centers and Military Schools of Military Engineering Officers and Non-Commissioned Officers, signals and military engineering guards were merged, and the School of Military Engineering Officers and Non-Commissioned Officers was established.³⁷

Between March and September 1945 a number of units and large units of pioneers, pontoons, river bridges, signals, roads and railways, naval engineering, aero signals, motorcycle and mountain signals, Signal and Pioneer Commands, Directorate of Works, Construction Corps were disbanded.³⁸

With the troops from the disbanded commands and units were organized: *Military Engineering Directorate*, with regiments 1, 2, 5, 6 and 7 Pioneers; *Signal Direction* with regiments 1-5 Signals; 2 Pontoneers Battalions; Railway Brigade with Regiments 1-5 Railways and Guard; 1st Airborne Transmission Regiment, 2nd Airborne Pioneer Regiment, Marine Engineering Battalion, Engineering, and Signal Educational Institutions, and Engineering Materials and Works Directorate³⁹.

In the period 1945-1946, the reduction of military personnel and therefore of the military engineering branch continued, and also the process of democratization of the Army began, a process that had special implications for the branch as well.

Following the Armistice Convention and later the Peace Treaty, the strength of the Romanian Army was drastically reduced. By *Decree-Law no. 128 of February 12, 1945*, signed by King Michael I, and later by *Law no. 433 of June 12, 1946*, also promulgated by the king, many officers, non-commissioned officers, and petty officers were made available. Some of them were engineers and railroads⁴⁰.

Regarding the command structures of the branch, in September 1946, Brigadier General Grigore Ionescu was appointed to lead the *General Inspectorate of Military Engineering*, in place of Major General Gheorghe Zaharescu. The new inspector of military engineering was a valuable officer who participated in both campaigns during the war.

A new structure appeared in the structure of the inspectorate for the first time, namely the *Education, Culture, and Propaganda Service*. The structure of the Inspectorate was as follows: *General Staff, Education, Culture and Propaganda Service, Second Commander for Instruction, and Second Commander for Endowment and Technical Works*. The *Works Department* was transformed into a *Works Department*.

The inspectorate kept some units and large units of military engineering in direct subordination, and others only from the point of view of instruction⁴¹.

Conclusions

Since the beginning of 1941, the military engineering structures within the commands of the Romanian Army had a complex organization,

with attributions on several lines, necessary for the leadership and coordination of all activities undertaken by the military engineering troops. Subsequently, after the mobilization of the force structure and after the involvement in the military actions carried out within the eastern campaign, these military engineering structures within the commands were continuously adapted according to the current needs.

During this period, the center of gravity was focused on the military engineering command structures, namely the *Superior Directorate* and the *Military Engineering Command*. Following the accumulation of war experience, through these structures, a series of measures were taken regarding the reorganization or establishment of new command structures, as well as engineering troops. The main measures were the adaptation of the leadership, organization, and deployment of the engineering troops, the arrangement for the defence of the territory of Bessarabia and Moldova, and the endowment of the troops with new categories of technique, equipment, and engineering materials.

After August 23, 1944, and until the end of the period under analysis, following the dissolution of the Superior Directorate and the Military Engineering Command, the *General Inspectorate of Military Engineering* was established, which will contribute to the reorganization of the military engineering branch, which included abolitions, establishment, transformations and reorders of units and large units.

The success of the Romanian Army in both campaigns in which it participated, of the engineering troops as well as of all the branches, was based on economic, moral, and military factors. Of particular importance were the firm and supple leadership exercised on the whole scale of the commands, the special skill with which the Romanian commands achieved the cooperation, in a first stage, with the German commands and later, with the Soviet ones.

The commanders of the Romanian engineering units, from all echelons, had theoretical training and a lot of experience in leading the troops. They knew and competently applied the principles of leading and using military engineering troops in operations and combat⁴².

There was uninterrupted knowledge by the commanders of the detailed situation of the forces

and means of military engineering, the measures taken to prevent moments of crisis, requiring early reinforcements from the upper echelons, or engaging the local population and administration structures in the areas of operations.

The commanders of the military engineering of the armies or army corps, personally or through their assistants, were in the troops at the times and places where the most important and decisive missions were carried out, even risking their lives.

The military engineering branch in World War II had significant human and material losses. The losses of the engineering troops amount to a number of thousands of soldiers, respectively officers, non-commissioned officers, and troops.

NOTES:

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2 [The General Staff of the Army], *The Order of battle of the Armed Forces in Peacetime on April 1, 1941*, Printing House of the General Staff, Bucharest, 1941, *passim* (pp. 10-44).

3 [Arch. M.Ap.N.-M.St.M.], File no. 475/1, *Brochure no. 26 with the order of battle of the armed forces*, apud Col. (ret) Petre Zaharia, Col. (ret) Emanoil Ene, Col (ret) Florea Pavlov. *History of the military engineering branch in Romania*. Vol. II, Military Publishing House, Bucharest, 1995, pp. 90-92.

4 *Ibidem*.

5 *Ibidem*, p. 101.

6 *Ibidem*, p. 103.

7 *Ibidem*, p. 120.

8 *Ibidem*, pp. 120-121.

9 [Ministry of National Defence], *Organization and functioning of the Ministry of National Defence*, MAN Printing House, Bucharest 1941, p. II-VII, pp. 24-27, 44, 60 (details on the attributions of military engineering command structures).

10 *Ibidem*, p. 25.

11 Col. Marian Gargaz, Col. Mircea Sclicpea, Col. Dorin Cheța, Col. Benone Burtan, *The military engineering branch of the Romanian Army. 150 years of sacrifices and glory*, Publishing House of the Army Editorial Technical Center, Bucharest, 2009, p. 160; Col. Petre Zaharia et al., *op.cit.*, pp. 155-156.

12 *Ibidem*, p. 188.

13 *Ibidem*, pp. 188-190.

14 [General Staff], *Order of Battle of the Armed Forces in Peacetime, on July 1, 1943*, Printing House of the General Staff, Bucharest, 1943, pp. 4-5.

15 *** *Law on the administration of the armed forces*, Printing Service, Bucharest, 1943.

16 Col. Petre Zaharia et al., *op.cit.*, p. 188.

17 *Ibidem*.

18 *Ibidem*, p. 189.



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21 Col. Petre Zaharia et al., *op.cit.*, pp. 190-194.

22 *Ibidem*, pp. 195-196.

23 Coord. Maj. Eftimie Ardeleanu, LTC Alexandru Oșca, Res Dumitru Preda., *History of the General Staff. Documents. 1859-1947*, Military Publishing House, Bucharest, 1994, pp. 352-353.

24 Col. Nicolae Ciobanu, PhD et al., *Course on the history of military art*. Vol. III, Bucharest, 1988, pp. 146-149.

25 Col. Petre Zaharia et al., *op.cit.*, pp. 204-206.

26 *Ibidem*, p. 226.

27 *Ibidem*, p. 227; Coord. Maj. Eftimie Ardeleanu et al., *op.cit.*, pp. 353-356.

28 In the General Staff. *The order of battle of the Army in peacetime on December 1, 1944*, Defence Staff Library, no. IV/088/1, *passim*, a guard pioneer regiment appeared at the Army Corps, four pioneer regiments, at the Mountain Corps a Mountain Pioneer Group appeared with three mountain pioneer battalions.

29 *Ibidem*, 17; Col. Petre Zaharia et al., *op.cit.*, p. 227.

30 *Ibidem*, p. 228.

31 [General Staff], *The order of battle of the Army in peacetime on December 1, 1944*, pp. 17-18.

32 [Ministry of War], *Organization and functioning of the Ministry of War* (contains details on the attributions of military engineering command structures), 1944, pp. 35, 41-42, 51-54.

33 *Ibidem*, pp. 57-58.

34 Col. Petre Zaharia et al., *op.cit.*, 331.

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