LOGISTICS SUPPORT OF THE SERBIAN ARMED FORCES (SUPPLY AND MAINTENANCE THROUGH PUBLIC PROCUREMENT)

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FIELD: Logistics

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Abstract:

Introduction/purpose: The work is based on the Rule of the Technical Service, the Law on Public Procurement, as well as on the experience gained in performing the duties of the Chief of Logistics in the Logistics Battalion of the Armed Forces. It contains the concept of Logistics Support and presents a part of the supply and maintenance system through Public Procurement in the Logistics Battalion of the Armed Forces.

Methods: The theoretical system of supply and maintenance is very complex and consists of a number of elements, organizational units, as well as certain principles. During the implementation, it is necessary to take into account all the principles and adhere to the rules and instructions. Also important was the help of colleagues from the Armed Forces and other state institutions who are in relevant positions and are important for logistics support.

Results: The final result of the work is a presentation of some activities performed by the logistics body in the battalion with a review of procurement under account 4252. In the final part of the paper, the emphasis is placed on the instructions which regulate and define the division of procurement in more detail, as well as on the implementation according to expenditure account 4252 on "ongoing maintenance and repair of equipment".

Conclusion: During the preparation of the paper, the biggest difficulty was the change of various rules and laws. Some rules and literature were written in the 1970s, and are still in force. A proposal for further tendencies would be to define new rules and organizations based on the experience of the countries in the region where the system has taken root.

Key words: logistics support, public procurement, supply, maintenance, ongoing maintenance.

Introduction

The paper is based on the Rule of the Technical Service, the Law on Public Procurement, as well as on the experience gained in performing the duties of the Chief of Logistics in the Logistics Battalion of the Armed Forces.

The paper discusses logistics support in general and the implementation of procurement at the battalion level.

In the final part, the emphasis is placed on the instructions which regulate and define the division of procurement in more detail, as well as on the implementation according to expenditure account 4252 i.e. "ongoing maintenance and repair of equipment".

The concept of logistics

The origin of the term logistics is related to the Greek word "logistikos", which means the skill of counting with numbers, and later with algebraic symbolism. Athenian officials who calculated state needs were called logisticians. According to other sources, this term is related to the French word "la logistique" which means lodger, predecessor.

In the military sense, this word was first used in the ninth century by Leo VI the Wise, the Byzantine emperor, who divided the art of war into strategy, logistics and tactics, and under logistics he understood activities related to the preparation of military campaigns (supply as well as assessment of enemies and land).

Much later, the French, and later the Russian general, the Swiss Antonie Henri Jominie (1779-1869), more specifically defined the concept of logistics and extended it to other general staff affairs. Many people associate this word with the word logic, because logistics deals with the logical integration of different activities.

It can be said that logistics today represents a qualitatively new approach to solving problems. It is a powerful scientific discipline in development for which the subject, theory, methods and language are not yet precisely defined, but which integrates numerous theoretical and practical achievements from several fields related to technical and organizational systems.

Logistics (as a science and function) has significant applications in both military and civilian systems, and therefore specific types of logistics are being developed such as: national logistics, civilian logistics, military logistics, industrial logistics, integrated logistics support and the like.

We are certainly primarily interested in military logistics. However, military logistics (although it is considered relatively independently) is

also part of national logistics, and, through it, part of international logistics. For its successful functioning, it is necessary to incorporate integrated logistics i.e. integrated logistics support (with significant influence and to be discussed later) directly related to armaments (weapons systems) and other technical materiel (systems) and military equipment as a link between the military and the country's economy.

Admiral Eccles gave simple definitions of logistics (Eklz, 1968), which, given the technical and technological development and current international relations, may require a better interpretation, which we can, in fact, understand well.

- International logistics is the process of planning and providing goods, facilities and services to support the military and the civilian economy at the international level.
- National logistics is the process of planning and providing goods and services to support national military forces and their operations, the national and civilian economy and its international obligations and requirements.
- Civil logistics is a process of planning and providing goods and services to support the civil economy.
- Military logistics is the process of planning and providing goods and services to support military forces.

National and military logistics are interesting for us in clarifying the importance and need for the introduction of logistics and logistics support in the Serbian Army. Therefore, they could be defined (although not fully in line with the requirements of scientific definition) as follows (Nikolić, 2000).

- National logistics aims to provide optimal logistics support to the national economy and national defense as a single system, provided that the internal and external requirements of such a system are met.
- Military logistics aims to provide logistics support to national defense, i.e. to its military forces and their operations (i.e. actions) in peace and war.

Logistics support

Logistics support (LS) in peace is organized and performed to support combat training, create favorable conditions for life and work as well as to prepare for timely transition from peacetime to war organization and maintenance of the necessary combat readiness. Both in war and in peace, the LS system is continuous.

The principles of LS (Pantelić, 1986) represent the attitudes that guide the preparation and implementation of logistics support functions in the implementation of missions and tasks. These are the starting points in the construction of the system, and they are derived from the scientific knowledge of the legality of armed combat and the valid doctrinal statements on the use of the Army.

By analyzing the conditions for planning and implementing LS, we can see the existence of general and special principles in LS.

The general principles of LS are: continuity, timeliness, completeness, elasticity, economy, and flexibility.

Continuity implies constant realization of LS in all conditions. It is achieved by establishing a favorable organization, allocating material reserves and service resources by synchronizing the work of commands, staffs, administrations, bodies and units and logistic support institutions, which ensure continuity in logistics support.

In order to achieve continuity of LS, it is necessary to improve and train all elements of the logistics support system for work in war and in the most unfavorable conditions.

Timeliness means delivering assets to users and providing services to users when needed. For example, if an artillery unit is supplied with ammunition for fire preparation much in advance, the unit's movement, if required, will be more difficult. If ammunition is delivered after fire preparation is completed, it is clear that the unit could not have completed its task to the fullest, and the responsibility lies with the bodies that did not provide timely delivery.

Completeness means the completeness of the delivered material resources, meeting the needs of the units with all the necessary resources and providing all the necessary services. For example, if fuzes are not delivered with artillery shells, the unit cannot perform its task. Or, if the unit does not receive all kinds of necessary material resources or if technical material resources are not renewed, the execution of the task may be called into question.

Flexibility means the ability of the LS system to adapt its organization and work to the conditions and changes of a particular situation. The flexibility of the system ensures the functioning of the LS system in all forms of armed actions and in the entire territory of combat operations.

Economy means performing tasks with the least expenditure of resources and labor. Although the military is a non-productive organization, it is still important, given the value of the material flowing through the LS system, to ensure rationality and economy in the system.

Economy is achieved by taking complex measures, with special attention must be paid to the orderliness and timeliness of preparations.

The special principles of LS are derived from the principles of the national war skills. They change in accordance with changes in the objective conditions and legality of armed combat. Therefore, they must be creatively applied, new ones found, theoretically shaped and tested in practice.

The special principles of LS are the following principles: unity of logistics support system, centralized management of logistics support, territorial organization of logistics support, universality of logistics support units, automation in LS, and LS as required.

The unity of the LS system implies that the LS system is unique to the defense system as a whole, with a division of responsibilities. It fits into a single system of providing material conditions by the state, with full reliance on the potential of the territory as a whole.

Territoriality of the LS organization implies the territorial organization of the logistics support system. In that sense, adequate territorial LS and institutions are formed, and they present executive bodies for LS on their territories. They perform LS of all units and institutions that rely on them in accordance with the reliance scheme and of all units that perform their tasks in that territory.

The universality of LS units is reflected in the organizational and formative ability of LS units to perform complete LS of all units and institutions that rely on them. Rapid changes in the situation and different conditions for conducting combat operations will affect the formation of temporary formations and frequent changes in subordination of units. That is why the logistic units - institutions are organized in such a way as to provide quick subordination, maneuvering of reserves and monitoring of combat schedules.

The functions of logistics support are realized through technical, quartermaster, medical, veterinary, traffic, and construction support (Conić, 2008).

Technical support

Technical support is an organized and mutually harmonized set of activities, actions and procedures of commands (administrative units) and units (institutions) of the army which, in cooperation with the competent state bodies, ensure the supply and maintenance of TMR. Timely and uninterrupted TS creates the necessary material and technical conditions for living, working and performing combat activities.

It is realized through bases that are qualified for TS of all units-institutions in the territory they cover (SSNO, 1979).

Technical support includes:

- supply of technical material resources, and
- maintenance of technical material resources.

Concept of supply

Supply of material resources is the basic function of logistics support. It is a planned and organized activity of commands, administrations, units and institutions as professional bearers which ensures timely and uninterrupted provision of LS resources with timely and uninterrupted provision of units and institutions with material resources (MR) necessary for life, work, training, construction - maintaining combat readiness, that is, in order to create the necessary material and technical conditions for armed combat (Maksić et al, 2005).

Supply can be:

- indirect (through the line of administrative bodies) when the flows of documents are realized according to the basic supply scheme: from the highest to the lowest bodies, and
- direct (through the line of executive bodies) when the units and institutions address the executive supply bodies: units and warehouses.

Supply is realized when appropriate conditions are met, i.e. when in a process or system there is a need for a certain type of assets and such assets can be provided from appropriate sources of supply. Sources of supply must be able to provide necessary assets in required quantities. It should be taken into account that, in order to realize the needs in a given time, different supply elements are engaged and that there is a constant exchange of information about the needs of users and possibilities of realization of supplies.

Supply processes

Supply processes are:

- planning,
- procurement,
- fulfillment, and
- managing and handling.

Planning includes planning activities of administrative bodies about the fulfillment with MR, material formation, sets, criteria, norms and spending of MR, as well as other normative acts. It is done through longterm and medium-term development plans. Various data from studies and analyzes are used in making the plans.

Procurement is the process by which procurement and technical authorities implement equipment plans, as well as task and funding plans. It is done on the basis of approved plans of tasks and financing for the current year.

The order fulfillment is the process of realization of plans for equipping units and institutions with assets with the aim of forming the initial fulfillment of war reserve (WR) and peacetime supplies at all levels of supply and their maintenance at the prescribed level. Data from records, equipment plans, and various orders are the basis for planning the fulfillment of MR.

Managing and handling include the processes of receiving and sending MR, as well as storing, renewing, categorizing and distributing them. Material resources distributed to units and institutions are managed by commanders and handled by operators.

Concept of maintenance

Maintenance is an activity which ensures the required degree of correctness and reliability of TMR by the planned use of available maintenance capacities and the application of prescribed measures and procedures (Škola nacionalne odbrane, 2005).

The basic principles on which maintenance is based are:

- Centralized management resulting from the commanding system in the Army of Serbia. Based on this principle, commands and administrations make unique plans, organize and manage the maintenance of TMR.
- Territoriality in the organization of maintenance it is reflected in the support of units and institutions and the planned and prepared capacities of the territory.
- Autonomy in maintenance it is expressed by qualified staff and material equipment of ships, units and institutions for the execution of all activities in the maintenance of TMR within their competence.
- Unique technology it provides identical access to an appropriate type of maintenance at each command and executive level and allows continuous maintenance of TMR.
- Timeliness in maintenance it is achieved by timely implementation of measures, procedures and actions to keep TMR in good condition for as long as possible.

- Rationality - it is reflected in the long-term preservation of the correctness of TMR and proper handling of human and material resources.

Elements of the maintenance system

The elements of the maintenance system are:

- personnel (officers, non-commissioned officers, military officers and employees, contract soldiers, conscripts), who exist in administrative and executive bodies:
- technical material resources (reserves and stocks of OS, equipment, etc.);
- the space in which the elements of the maintenance system are developed;
 - maintenance plans;
 - maintenance documents; and
 - military professional literature in the field of maintenance.

The organization and implementation of maintenance is carried out by administrative and executive bodies.

Administrative bodies plan and organize the implementation of maintenance, adopt regulations governing the work of services, monitor development and propose the most favorable organizational and formation solutions, plan education, training and advanced training of personnel and keep the prescribed documentation and records.

Executive bodies are institutions and units of LS that perform and directly conduct maintenance for units and institutions that are under their jurisdiction.

Executive bodies consist of units and institutions. They are responsible for the immediate professional realization of maintenance tasks.

Maintenance units are part of LS units. These are organizational and formation teams intended for the realization of certain tasks within the prescribed types of maintenance of TMR.

Depending on the purpose, type of maintenance they perform, the scope and types of tasks in the field of maintenance of technical material resources and the command level they support, maintenance units are organized as:

- maintenance companies;
- maintenance platoons; and
- maintenance squads.

Within maintenance units, or independently, specialized maintenance units are formed based on TMR groups: weapons, motor vehicles, military communications, electronics and electric power means.

Supply and maintenance through public procurement in the logistics battalion of the Land Army

In the brigades of the Land Army, the bearer of logistics affairs is the logistics battalion on which organic and extra-organic formations rely for various account expenditures.

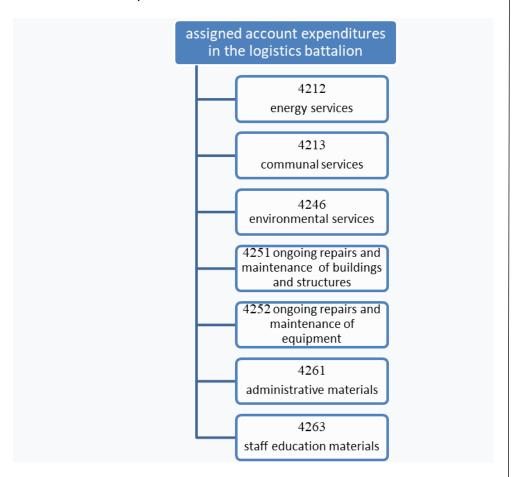


Figure 1 – Assigned account expenditures in logistics battalions Puc. 1 – Расходы по затратным счетам тылового обеспечения в батальоне Слика 1 – Додељени контни расходи у логистичким батаљонима

Regarding the realization of supply and current maintenance through public procurement, procurement according to expenditure account 4252, i.e. "ongoing maintenance and repair of equipment", is realized by the Logistics Group S-4 Battalion Command by initiating Public Procurement in accordance with the Law on Public Procurement and Rulebook on Material and Financial Operations.

Public procurement procedures

Pursuant to the general provisions of the Law on Public Procurement Article 51 (Službeni glasnik Republike Srbije, 91/2019), public procurement procedures are:

- 1) open procedure;
- 2) restrictive procedure;
- 3) competitive procedure with negotiation;
- 4) competitive dialogue;
- 5) negotiation procedure with a public invitation;
- 6) innovation partnership; and
- 7) negotiation procedure without a public invitation.

At the battalion level, based on expenditure account 4252 ("ongoing maintenance and repair of equipment"), an open procedure (by concluding Framework Agreements) is usually conducted as well as a procedure under Article 27 of the Law on Public Procurement to which the Law does not apply.

Procurement carried out by logistics authorities in logistics battalions based on expenditure account 4252 is divided into three parts:

- Consolidated Procurement (procurement applicable through Framework Agreements);
 - Procurement in the field of defense and security; and
 - Procurement to which the law does not apply.

Within the stated account expenditure, there are different purchases of "services" and "goods". Procurement is considered initiated at the moment when the "Decision on initiating procurement" is made, and not by introducing the request into the records of the user unit.

Consolidated procurement

As a rule, the contracting authority awards the contract in an open or restrictive procedure, and may also perform it in other public procurement procedures if the conditions prescribed by this Law are met, except for the negotiation procedure with a public invitation. As a rule, the

contracting authority awards the contract in an open procedure, restrictive procedure, negotiation procedure with a public invitation or competitive dialogue, and may also perform in other public procurement procedures if the conditions prescribed by this Law are met, except in competitive negotiating procedures.

The minimum deadline for submitting bids in an open procedure is:

- 1) 35 days from the day of sending the announcement of the public invitation, for public procurement whose estimated value is equal to or greater than the amount of European thresholds;
- 2) 25 days from the day of sending the announcement of the public invitation, for public procurement whose estimated value is less than the amount of European thresholds;
- 3) 15 days from the day of sending the announcement of the public invitation, for the procurement of works whose estimated value is lower than 30,000,000 dinars; and
- 4) ten days from the day of sending the announcement of the public invitation, for the procurement of goods and services whose estimated value is lower than 10,000,000 dinars

Procurement through Framework Agreements is divided into procurement related to services or goods. Battalion commands rarely enter into Framework Agreements which, during their validity, carry out the procurement of goods and services by concluding contracts or issuing purchase orders.

The framework agreement is in principle concluded by the Logistics Directorate J-4 with a validity period of 2 to 3 years, depending on whether it is concluded with 1 or more bidders.

The Law on Public Procurement does not follow the current Rulebook on material and financial operations, according to which the valid rule is that if the value of the procurement exceeds 500,000.00 dinars without VAT, a contract is signed for it, otherwise an order form is issued. The Law on Public Procurement has a higher "threshold of the amount" of issuing a purchase order and it is 5,000,000.00 dinars.

Procurement in the field of defense and security

Procurements in the field of defense and security were conducted on the basis of Article 20 of the Law on Public Procurement (Special Exceptions in the Field of Defense and Security), paragraph 6) concluded by the Republic of Serbia with state, regional or local self-government bodies of other countries.

- (1) procurement of military equipment or security-sensitive equipment;
 - (2) works and services directly related to such equipment; or
- (3) works and services exclusively for military purposes or securitysensitive works and security-sensitive services.

Bidders who apply and who enter the selection procedure for signing the Framework Agreement pass the security check and the validity of the Framework Agreement is for 5 years.

The procurement is announced by the Tactical Holder of a certain asset, and is carried out by the end user in the Air Force (logistics battalions).

Procurement to which the law does not apply:

Procurement in the sense of the Law on Public Procurement to which the law does not apply is defined on the basis of Article 27 of the LPP.

The provisions of this law do not apply to:

- 1) procurement of goods, services and conducting design competitions, the estimated value of which is less than 1,000,000 dinars, and procurement of works whose estimated value is less than 3,000,000 dinars;
- 2) procurement of goods, services and conducting design competitions, the estimated value of which is less than 15,000,000 dinars, for the needs of diplomatic missions, diplomatic and consular missions and performing other activities of the Republic of Serbia abroad, as well as procurement of works for those needs the estimated value is less than 650,000,000 dinars;
- 3) procurement of social and other special services referred to in Article 75 of this Law, the estimated value of which is less than 15,000,000 dinars when the procurement is conducted by a public procuring entity, or less than 20,000,000 dinars when the procurement is conducted by a sectoral procuring entity.

In the case referred to in paragraph 1 of this Article, the principles of this Law are applied in a manner that is appropriate to the circumstances of the specific procurement.

When the procurement from this article is performed, the contracting authority is obliged to prevent the existence of conflicts of interest, to

ensure competition and that the agreed price is not higher than the comparable market price.

The public procurement procedure is conducted by a public procurement officer, i.e. a person employed in public procurement, unless the complexity of the subject of public procurement does not require the participation of other experts. In the procurement procedure, the procuring entity invites at least 3 persons who perform the activity that is the subject of public procurement and who, according to the information, are able to perform the procurement, submit bids and at the same time perform the invitation to submit bids on the public procurement portal and its website.

In practice, each SA unit of the operational level has a certain account and certain funds by groups of PS, which is available at certain time intervals. A commission is established to act in accordance with Articles 31 and 39 of the Law on Public Procurement (Službeni vojni list 29/2014).

Before each procurement of goods, regardless of the type of procurement, it is necessary to send a request to CLoB as the carrier of logistics at the level of the Serbian Army, whether the required spare part is in stock. After receiving a negative answer, the unit that sent the request initiates the procurement in accordance with the Laws and regulations.

Conclusion

This paper covers the concept of Logistics Support and presents a part of the supply and maintenance system through public procurement in the Logistics Battalion of the Armed Forces.

The theoretical system of supply and maintenance is very complex and consists of a number of elements, organizational units, as well as certain principles.

During the implementation, it is necessary to take into account all the principles and adhere to the rules and instructions.

References

Conić, N. 2008. *Mornaričkotehničko i tehničko obezbeđenje, zabeleške sa predavanja*. Beograd: Vojna akademija (in Serbian).

Eklz, E.H. 1968. *Logistika u nacionalnoj odbrani*. Beograd: Vojnoizdavački zavod (in Serbian).

Maksić, R., Andrejić, M.& Nikolić, N. 2005. *Taktika tehničke službe*. Beograd: Ministarstvo odbrane, Sektor za ljudske resurse, Uprava za školstvo (in Serbian).

Nikolić, M. 2000. *Nacionalna logistika, predavanja u ŠNO*. Beograd: Škola nacionalne odbrane (in Serbian).

Pantelić, B. 1986. *Snabdevanje tehničkim materijalnim sredstvima*. Zagreb: Visoke Vojne Škole KoV JNA (in Serbian).

- -Službeni glasnik Republike Srbije. 91/2019. *Zakon o Javnim nabavkama*. Beograd: JP "Službeni glasnik" (in Serbian).
- -Službeni vojni list. 29/2014. *Pravilnik o Materijalnom poslovanju.* Beograd: Ministarstvo odbrane Republike Srbije (in Serbian).
- -SSNO. 1979. *Pravilo Tehničke službe*. Beograd: SSNO, TehničkaUprava (in Serbian).
- -Škola nacionalne odbrane. 2005. *Organizacija održavanja TMS, skripta*. Beograd: Škola nacionalne odbrane (in Serbian).

МАТЕРИАЛЬНО-ТЕХНИЧЕСКОЕ ОБЕСПЕЧЕНИЕ ВООРУЖЕННЫХ СИЛ (СНАБЖЕНИЕ И ТЕХНИЧЕСКОЕ ОБСЛУЖИВАНИЕ С ПОМОЩЬЮ ГОСУДАРСТВЕННЫХ ЗАКУПОК)

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РУБРИКА ГРНТИ: 81.88.00 Материально-техническое снабжение. Логистика;

81.88.75 Экономика, организация, управление, планирование и прогнозирование в материальнотехническом снабжении

ВИД СТАТЬИ: обзорная статья

Резюме:

Введение/цель: Данная статья основана на Регламенте о технической службе, Законе о государственных закупках, а также на опыте, полученном при исполнении обязанностей начальника тылового обеспечения при батальоне логистики Вооруженных сил Республики Сербия. В работе приведены положения о материально-техническом обеспечении в целом и снабжении на уровне батальона.

Методы: Теоретическая система снабжения и обслуживания представляет собой сложную структуру и состоит из ряда элементов, организационных единиц, а также определенных принципов. При ее воплощении в жизнь необходимо учитывать все принципы и придерживаться правил и инструкций. Немаловажной оказалась и помощь коллег - представителей

Вооруженных сил и других государственных учреждений, занимающих важные для тылового обеспечения должности.

Результаты: Конечным итогом статьи является представление части работы, выполненной отделом материально-технического обеспечения батальона, с обзором закупок по счету 4252. В заключительной части статьи акцентируется внимание на инструкциях, дополнительно регламентирующих и определяющих разделение закупок и выполнение отчета по расходам 4252 «текущий ремонт и техническое обслуживание оборудования».

Выводы: Самой большой трудностью в написании статьи оказались изменения различных правил и законов. Несмотря на то, что некоторые правила и литература были написаны в 1970-х годах прошлого века они все еще в силе. В данной связи предложено применение современных тенденций в определении новых правил и организации, основанных на опыте соседних стран, где эта система укоренилась и успешно действует.

Ключевые слова: материально-техническое обеспечение, государственные закупки, снабжение, техническое обслуживание.

ЛОГИСТИЧКА ПОДРШКА ВОЈСКЕ СРБИЈЕ (СНАБДЕВАЊЕ И ОДРЖАВАЊЕ ПУТЕМ ЈАВНИХ НАБАВКИ)

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ОБЛАСТ: логистика

ВРСТА ЧЛАНКА: прегледни рад

Сажетак:

Увод/циљ: Рад је заснован на Правилу техничке службе, Закону о јавним набавкама, као и на искуствима начелника логистике у логистичком батаљону КоВ-а стеченим на обављању дужности. Наведене су одредбе о логистичкој подршци уопште и спровођењу набавки на нивоу батаљона.

Методе: Теоријски систем снабдевања и одржавања је веома сложен; састоји се од низа елемената, организацијских целина, као и од одређених начела. При реализацији је потребно узети у обзир сва начела и придржавати се правила и упутстава. Такође, значајна је и помоћ колега из ВС и других државних институција, који се налазе на одговарајућим позицијама, а битни су за логистичку подршку.

Резултати: Крајњи резултат рада јесте приказ дела послова које обавља орган логистике у батаљону са освртом на набавке по конту 4252. Тежиште завршног дела рада је на инструкцијама којима се ближе регулише и дефинише подела набавки, као и спровођење по контном расходу 4252 — "текуће поправке и одржавање опреме".

Закључак: Приликом израде рада највећу потешкоћу представљала су разна правила и закони. Наиме, поједина правила писана су седамдесетих година прошлог века, и још увек су на снази. Стога би било потребно да се дефинишу нова правила и организације, по угледу на земље у окружењу у којима је тај систем заживео.

Кључне речи: логистичка подршка, јавне набавке, снабдевање, одржавање, текуће одржавање.

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