# Discussion on improving the management of engineering equipment in an engineering brigade

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**Abstract:** An engineering brigade is an engineering force, undertake the construction and maintenance tasks of military projects such as the military port and the military airport. Its engineering equipment is the important guarantee of military engineering construction and also the basic guarantee of improving the combat effectiveness of troops. After the special inventory of assets, the brigade found that there are deficiencies in asset management, especially in the management of engineering equipment, which need to be improved. The purpose of this paper is to through the scientific preparation of engineering equipment purchasing annual budget, on the basis of analysis of engineering equipment management process, the use of the Internet technology to design and build engineering equipment management information system, realizing the data sharing between systems, business interaction, etc, to optimize the engineering equipment management procedure, to ensure that the engineering equipment management is an effective, safe, complete and accurate, So as to further improve the engineering equipment management system.

#### 1. Introduction

According to a series of directives made by President Xi Jinping and the head of the Central Military Commission on strengthening asset management, an engineering brigade has carried out a special inventory of assets [1]. Because engineering equipment has the characteristics of large amount of money, wide involvement and large quantity, it plays an important role in guaranteeing the battle, combat readiness, life and office of the troops, and the management standard directly contributes to improving the combat effectiveness of the troops [2-4]. Therefore, it is very important to improve the management of engineering equipment.

# 2. The Significance of Improving the Management of Engineering Equipment

## 2.1 Accelerating the transformation and development needs of engineering brigade

By strengthening engineering equipment management, to adapt to the engineering team from peacetime to wartime repair engineering construction scrambling transformation, duly formed "three strategic capabilities", speed up the build a world-class engineering forces, the demand for assets resources is more and more big, quality is higher and higher, but the overall level of construction engineering battalion asset management and security forces construction development mission status is not enough to match, Its contribution to the combat effectiveness of the army remains to be improved. In particular, the "fog" problem of resources, which has plagued the PLA for a long time, is a prominent "stuck point" and "blocked point" that restricts the support capability of the PLA. It is urgent to strengthen asset management, especially engineering equipment management, find out the equipment base, comprehensively evaluate the strength, status and potential of equipment, realize the integrated construction of resources, intensive guarantee, and better guarantee the transformation and development of engineering brigade.

## 2.2 Standardizing the management needs of engineering equipment in engineering brigades

For a long time, a project brigade engineering equipment management division, extensive management, low efficiency and other problems are more prominent, especially before the reform, there are running and leaking, hamster rampant phenomenon, a large number of old materials backlog inventory. To this end, an engineering brigade through the use of engineering equipment statistics found that nearly half of the engineering equipment placed in the warehouse unused, and even some of the equipment has been idle storage for more than 20 years. On the one hand, a large number of idle engineering equipment, on the other hand, military training equipment is very short. Therefore, it is urgent to standardize and perfect the management of engineering equipment and improve the utilization rate of equipment.

## 3. Problems existing in engineering equipment management of an engineering team

## 3.1 Some asset disposal lags behind

Table 1. Equipment management of an engineering team

Number(number)			Quality(number)		
total	uesd	%	worthy	usable	completion
256,785	135,991	52.96%	102,682	86,947	67,156

The total number in use in use rate intact worthy of use to be scrapped.

256,785 135,991 52.96% 102,682 86,947 67,156

# 3.2 There are too many idle assets and asset allocation is not scientific and reasonable

An engineering brigade through the use of engineering equipment statistics found that nearly half of the engineering equipment placed in the warehouse unused. The main performance is: First, the equipment configuration standard is not unified. For example, the various tasks of each department of an engineering brigade, together with the different working environment, means and personnel number, cause the basis and method of equipment configuration is difficult to be unified. Second, equipment disposal lack of planning. When preparing the unit budget at the beginning of the year, each department did not make the annual equipment disposal plan, and the number of equipment base mastered was not clear, resulting in more idle equipment in the unit. Third, some equipment lacks reasonable provisions and scientific decision-making, equipment increase is more arbitrary.

## 3.3 Equipment use efficiency is low and maintenance level is not high

First, the utilization rate of assets is low and waste is serious. A certain engineering brigade has "heavy money light things", "heavy purchase light tube", ultra-routine use of equipment and other phenomena. At the same time, equipment uses lack of evaluation and supervision process, stock equipment and budget management disjointed, equipment maintenance and repair problems generally failed to attract attention. Especially in special equipment and transportation equipment is particularly obvious. Equipment aging is serious, assets are used inefficiently and reset at high prices. Second, lack of regulation system. For idle and low utilization of equipment, due to the lack of a unified surplus and shortage adjustment mechanism, cannot be deployed in time; Idle equipment and waste among departments and units, as well as equipment replacement and equipment shortage exist at the same time, which makes it difficult to promote the rational allocation and use of equipment, resulting in military expenditure waste.

#### 4. Causes of engineering equipment management problems caused by an engineering brigade

# 4.1 The management laws and regulations are not perfect and the mechanism is not perfect

The current state-owned assets management system of the brigade is still in accordance with the 2004 Provisions on The Management of Military Assets (referred to as the Provisions), which is

objectively difficult to meet the asset management requirements of an engineering brigade established after the reform. Basically, behave in: it is asset standard amount is small. According to the regulations, items worth more than 500 yuan are regarded as fixed assets, while the accounting Law sets the amount at 1,000 yuan, much higher than the military regulations. Second, the limit of asset scrapping approval. According to the Regulations, the disposals of assets by a department with an original total value of less than 200,000 yuan shall be subject to the approval of the leaders of the secondary department or bureau (office). Where the original total value exceeds RMB 200,000 yuan (inclusive) and is less than RMB 500,000 yuan, it shall be examined and approved by the leaders of the headquarters, political Department, Logistics Department and Equipment Department respectively. If the total initial value exceeds 500,000 yuan (including less than 3 million yuan), the matter shall be examined and approved by the commander of the Navy; If the original total value exceeds RMB 3 million (inclusive), it shall be subject to the approval of the General Logistics Department. The original amount of a single piece of fixed assets of the brigade is more than 500,000 yuan, which needs to be reported to the Navy according to regulations. Therefore, the progress of all departments is delayed due to the factors of the approval level of the limit of discarded assets, and there is a phenomenon of waiting and waiting.

# 4.2 Equipment budget management lack of overall planning, planning

When preparing the budget, the brigade only considers the equipment to be purchased that year, and lacks the overall planning for the mission and future of the brigade. In the first two years of compiling the 14th and 15th Five-year plans, there was a lack of overall funding requirements, manpower and material arrangements for equipment planning. Missions for combat engineers are only satisfied with currently functioning equipment. As for the equipment close to actual combat, it is not included in the budget of this level, and the input of funds, manpower and material resources is completely allocated by the superior.

Although the budget management system of the pre-combined version is adopted, the subdivision of the allocation standard, model and service life of the equipment is not sufficient. The budget is generally prepared in accordance with the minimum allocation life of the equipment. The allocation standard is equipped in accordance with the "Printing and Distributing the Administrative Assets Allocation Standard of an Engineering Brigade (Trial)", and the model and brand are not detailed enough. The equipment purchase plan of each part is not precise enough. The departments with large funds can update regularly, or even annually, while the parts with small funds are in disrepair and cannot be replaced.

# 4.3 Low informatization degree of equipment management

At present, the brigade engineering equipment management still stays in the original book, there is a discrepancy with the physical account. In the era of rapid development of Internet technology, the brigade engineering equipment management still stays in the single machine book, has not formed a big data network. The original account can only reflect the number and location of equipment at a certain time, and cannot monitor the situation of equipment in real time. The equipment information of each unit does not circulate, resulting in repeated purchase and idle equipment.

#### 5. Improvement measures of engineering equipment management in an engineering brigade

# 5.1 Revise the engineering equipment management system and clarify the responsibilities of the department

The original management mode of "who uses who manages, the financial department does statistics" is not suitable for the equipment management of each team and department at present, and it is likely to lead to abnormal loss of engineering equipment. Therefore, according to the relevant documents of the superior, combined with the actual situation of the brigade, in line with the principle of seeking truth from facts, it is necessary to revise the asset management provisions of engineering equipment. First of all, the responsibilities of each department should be clearly defined. First, the

asset leading department should act as the competent department and fulfill the supervision responsibility of engineering equipment. Second, the equipment use management department is responsible for managing the overall arrangement of engineering equipment, and assume the responsibility of maintenance; Third, the statistical department is generally undertaken by the financial department, to ensure that the actual account.

Secondly, all departments are responsible and perform their duties. First, the competent authorities formulate a series of effective equipment management systems such as equipment procurement, use, management, statistics, supervision and expenditure. Second, the asset use management department shall, in accordance with the management system formulated by the competent department, formulate detailed provisions on the overall use, maintenance and maintenance of equipment. Third, the asset statistics department shall fulfill its duties and do equipment statistics and verification work regularly and irregularly.

# 5.2 Improve the budget system for the management of engineering equipment and scientifically prepare the annual budget for engineering equipment

While preparing the annual budget of equipment, each equipment using department should make overall arrangements for the purchase and disposal plan of equipment, scientifically sort out, check and evaluate the equipment status of the department and carry out annual tasks to improve the utilization rate of equipment.

# 5.3 Make full use of cloud computing, big data and other Internet + technologies to strengthen information management of engineering equipment and improve the effectiveness of engineering equipment management

Make full use of Internet + technology, establish a "clear account", register the equipment, equipment with "ID card" "account book", can achieve real-time dynamic management, improve the rational use of equipment, to accelerate the construction of modern asset management system to lay a solid foundation.

For example, after improvement, the staff headquarters of an engineering brigade planned to organize engineering exercises in a training site according to the annual plan. After sand table deduction, the need for various types of engineering equipment. Internet + technology was used to compare the performance status of the inventory equipment in advance, and it was found that 3 engineering equipment in the inventory of the unit had equipment aging and reached the status of being scrapped, so it was necessary to apply for purchasing xUGong certain equipment. Therefore, the tender was launched through the Internet platform of military enterprises in a timely manner, and 4 manufacturers were quoted for bidding. The business department will compare the bidding equipment with the price, delivery time, after-sales service and other information within 1 day, and finally determine the purchase of xUGong equipment of a large company. Timely purchase from the manufacturer ensured the smooth completion of the exercise task. In this case, the Internet + technology helps the unit to quickly discover the condition of existing equipment intact and new, which saves a lot of time, ensures the smooth completion of the exercise and greatly improves the combat effectiveness of the army.

Therefore, in the "three centers, one project" construction process, make good use of Internet + and big data, establish engineering equipment management information, but also can organically integrate logistics information system and combat information system; In the construction and use of Internet information system, can strengthen the management of data collection, synchronous upgrade of the brigade security system, by the statistical department timely equipment statistics, input into the special equipment system. Through the network management of the system center, the type and use value of equipment can be analyzed quickly to improve the effectiveness of engineering equipment management. At the same time, the Internet platform is used to optimize the procurement management of engineering equipment. With the gradual maturity of the military online trading platform, the procurement of engineering equipment through the Internet platform can not only effectively save military expenditure, but also greatly reduce the intermediate circulation links and

improve the use efficiency of equipment. As the procurement is made through the military's online trading platform, the relevant merchants have passed the confidentiality qualification examination and do not need to worry about leaks.

For example, an engineering team is in urgent need of relevant professional equipment in a training field and there is no relevant manufacturer near the training field. Through the military online trading platform, manufacturers can be quickly found to sell the equipment, and the procurement personnel can directly send the order to the training field through confidential channels. However, in previous years, the resident training required relevant professional equipment, which could not be provided by the level, it depended on the application to the superior, which was time-consuming and often not ideal. Now, through this example fully shows that by improving the equipment management system, especially after optimizing the equipment procurement system, not only improves the effectiveness of equipment management, but also greatly enhances the combat effectiveness of the army.

# 5.4 Strengthening effective supervision over engineering equipment

- 1. The management of the brigade can quantify the related asset management, conduct regular assessment of the subordinate unit (department), and link it with the year-end assessment of the leader of the unit (department). When the main leaders of each unit are transferred, the engineering equipment shall be transferred together with the transfer list. At the same time, the quantitative assessment is carefully analyzed and studied to find the deficiencies and weak links in the management work, regularly improve the management measures, further optimize the management, and improve the level of equipment management. For the damage of engineering equipment caused by mismanagement, the liability shall be ascertained and compensation shall be made according to the price; Those who embezzle should be transferred to disciplinary inspection and supervision departments for investigation.
- 2. The financial department of the brigade shall organize asset inventory and spot check periodically every year, promote the user to fulfill the principal responsibility of equipment management, and timely find the problems in equipment management.
- 3. Discipline inspection and supervision departments should strengthen supervision and evaluate equipment management as the focus of supervision. For the loss of equipment assets caused by human subjective factors, relevant responsible persons should be dealt with.

#### 6. Conclusions

In conclusion, to enhance the level of an engineering brigade of the fighting capacity and improve the team management ability, implementation of engineering equipment management scientific and standard, ensure engineering equipment loss, improve efficiency, combined with the present problems of the brigade and army goal request, the new era from science, system design, refining the budgeting, perfecting the information system, strengthening the management, supervision and other aspects to obtain, Multi-party cooperation to complete the systematic, overall project, to make contributions to the army asset management contributions to an engineering brigade.

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