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# FORMATION OF ACCOUNTING AND ANALYTICAL SUPPORT FOR MANUFACTURING STOCK MANAGEMENT AT THE ENTERPRISE

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#### **Key words:**

accounting and analytical support, production stocks, stock management; accounting of production stocks, material yield, material capacity, turnover The article examines current issues regarding the formation of accounting and analytical support in the management of industrial enterprises, in particular, in the management of production stocks. Negative factors that significantly reduce the effectiveness of management activities are given. The low degree of effectiveness of the decisions made regarding the need for the formation of stocks and their quantity can lead to the loss of profit by the enterprise due to downtime due to insufficient production stocks or to the freezing of funds due to their accumulation (inefficient use of current assets). Provided that the amount of inventory meets the needs of production and operational activity, the efficiency of inventory management increases significantly. The optimal amount of stocks is determined by the types of activities of the enterprise, the size of production. In the conditions of the modern economy, enterprises should develop a number of their own ways that will contribute to increasing efficiency in the management of production stocks. Improving the accounting and management of production stocks provides an opportunity to significantly shorten production and operational cycles, reduce costs related to stock storage, etc. In this context, the problematic aspects of the organization of accounting for production stocks are considered, the elements of accounting policy that have a significant impact on the financial results of activity are clarified, and the directions for improving the organization of accounting to ensure the performance of the analytical and control function of management are substantiated. Since industrial enterprises use a significant number of types of stocks, it is proposed to improve the accounting of transport and procurement costs, and it is also proposed to deepen the analytical accounting, which will allow obtaining detailed information in terms of materials and entities that deliver stocks to the enterprise. On the basis of the theoretical generalization of scientific approaches, the areas of analysis of production stocks are substantiated and the methodological features of each area are determined. Their application in practice will increase the informativeness of the results of the analysis of production stocks.

# ПРОГРАМНЕ ЗАБЕЗПЕЧЕННЯ ЯК СКЛАДОВА ОБЛІКОВО-АНАЛІТИЧНОГО ЗАБЕЗПЕЧЕННЯ ЕЛЕКТРОННОЇ КОМЕРЦІЇ НА ТОРГОВЕЛЬНИХ ПІДПРИЄМСТВАХ УКРАЇНИ

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# Ключові слова:

обліково-аналітичне забезпечення, виробничі запаси, управління запасами; облік виробничих запасів, матеріаловіддача, матеріаломісткість, оборотність У статті досліджено актуальні питання щодо формування обліково-аналітичного забезпечення в управлінні промисловими підприємствами, зокрема, в управлінні виробничими запасами. Наведені негативні чинники, які суттєво знижують ефективність управлінської діяльності. Низький ступінь ефективності прийнятих рішень стосовно необхідності формування запасів та їх кількості може призвести до втрати підприємством прибутку внаслідок простою через недостатність виробничих запасів або до заморожування грошових коштів через їх накопичення (неефективне використання оборотних активів). За умови величини запасів, яка відповідає потребам виробництва та операційної діяльності, суттєво підвищується ефективність

управління запасами. Оптимальна кількість запасів визначається видами діяльності підприємства, розмірами виробництва. В умовах сучасної економіки підприємства мають розробити низку власних шляхів, які сприятимуть підвищенню ефективності в управлінні виробничими запасами. Удосконалення обліку і управління виробничими запасами надає можливість значно скоротити виробничий та операційний цикли, зменшити витрати, пов'язані зі зберіганням запасів тощо. В цьому контексті розглянуто проблемні аспекти організації обліку виробничих запасів, з'ясовано елементи облікової політики що мають суттєвий вплив на фінансові результати діяльності та обгрунтовано напрями удосконалення організації обліку для забезпечення виконання аналітичної та контрольної функції управління. Оскільки промислові підприємства використовують значну кількість видів запасів, запропоновано удосконалення обліку транспортно-заготівельних витрат та запропоновано також поглибити аналітичний облік, що дозволить отримати детальну інформацію у розрізі матеріалів та суб'єктів, що здійснюють доставку запасів на підприємство. На основі теоретичного узагальнення наукових підходів обґрунтовано напрями аналізу виробничих запасів та визначено методичні особливості кожного напряму. Застосування їх на практиці підвищить інформативність результатів аналізу виробничих запасів.

# Statement of the problem

Each industrial enterprise can function only under the condition of proper organization of the accounting process, including inventory accountings, which ensure the operational activity of the enterprise and the possibility of continuing production. The creation of production stocks is due to many reasons, the main of which is ensuring the economic security of the enterprise. The lack of such stocks in the required amount can lead to the loss of the company's sales markets and customers due to the instability of the production process and untimely sale of the manufactured products. Production stocks represent the main part of the cost of production of any enterprise that carries out production activities, and they are an important component of its assets. It is impossible to solve the problems associated with the effective management of production stocks if their availability, optimal quantity and efficiency of use are incompletely assessed, which is why there is a need for effective analysis methods. Thus, the research and implementation of the main areas of increasing the efficiency of the economic activity of domestic enterprises provide for the improvement of accounting and analytical support for the management of production stocks, which will make it possible to provide the management with the necessary information for making rational management decisions.

# Analysis of recent studies and publications

Many scientists dealt with the problems of accounting and analytical provision of inventory management at enterprises of various industries. The problems and peculiarities of production inventory accounting were studied by L.V. Koval, Yu.V. Podmeshalska, T.V. Poleva, O.V. Tesak, and others. Areas of improvement of accounting methods, economic analysis and control of production stocks were studied by M.A. Bolyukh, V.Z. Burchevskyi, M.I. Horbatok, Y.O. Izmailov, S.V. Svirko and E.V. Mnykh etc. Such scientists as L.V. Babenko, V.G. Vasylieva, O.V. Konovalova, O.M. Polishchuk paid considerable attention to the issue of increasing the efficiency of accounting and analytical support for the management

of production stocks. issues regarding the improvement of organizational aspects of accounting and analysis of production stocks in accordance with the requests of the management system remain insufficiently worked out. Increasing the efficiency of production inventory management is an urgent problem for domestic enterprises, which determines the relevance of this topic.

# Objectives of the article

The purpose of the article is to study the organizational and methodological aspects of accounting and analytical support for the management of production stocks at the enterprise, to substantiate the approaches to its formation, to generalize the existing problems and to determine the areas of improvement.

### The main material of the research

Accounting and analytical support is a complex mechanism that combines the processes of accounting and economic analysis with the aim of forming an objective information base in accordance with the needs of users and the specifics of production development. That is, accounting and analytical support is formed on the basis of the interaction of subsystems of accounting and economic analysis.

The formation of accounting and analytical support for the management of production stocks at the enterprise involves:

- improvement of the existing organization of the accounting system in such a way that it ensures the performance of analytical and control functions of the enterprise management system;
- development of stages and corresponding methods of analysis of the state, movement, quality and efficiency of the use of stocks, taking into account the specifics of the enterprise's activities, the peculiarities of its production and organizational structure.

Accounting of production stocks at the enterprise is a complex system using interrelated methods and principles. Each component part of the accounting process of production stocks plays its important function, and their combination

makes it possible to obtain reliable accounting information about the movement of production stocks at the enterprise [5]. At the same time, it is production stocks that play a leading role in shaping the conditions for ensuring a smooth production process. Therefore, it is important to take into account all the main aspects of the organization of accounting for production stocks, because the issue of forming an accounting policy at the enterprise, including stocks, is exclusively within the competence of the business entity itself.

According to the Methodological recommendations on the accounting policy of the enterprise, the main elements of the accounting policy of the assessment and effectiveness of production stocks at the enterprise are the issue of choice [8]:

- stock accounting units (name or homogeneous group);
- the optimal method of estimating stock disposal;
- variant of accounting for production stocks in the accounting department;
- the method of accounting for transport and procurement costs.

The main performance indicators depend on the choice of the listed elements of the accounting policy in terms of stocks, in particular the cost of production, profit and indicators of the financial state of the enterprise.

As for inventory valuation, in accordance with the requirements of NP(S) 9 "Inventories", when inventory is disposed of, regardless of sale or transfer to production, their book value is estimated using one of the following methods: FIFO, weighted average cost price; regulatory costs; sales prices; the method of identified unit cost of production [7]. After analyzing each of the methods, the following features can be distinguished:

- the method of estimating the identified cost of a corresponding unit of stocks is most expedient to use for small amounts of stocks, because there is an assessment for each unit of stocks that are discarded and which are irreplaceable;
- the weighted average cost method is the most expedient to use for enterprises that use a large amount of stocks, because the cost of stocks is estimated not by each type, but by the total cost;
- a feature of the FIFO method is that the stocks that were the first to start production or arrived at the enterprise are evaluated first.

However, it must be taken into account that the choice of methods for assessing the disposal of stocks has a significant impact on the analytical indicators of financial reporting. Thus, the FIFO method overestimates financial results, because when it is used, the cost price is underestimated due to the write-off of stocks at lower "first" prices. From the point of view of calculating solvency indicators, the FIFO method is the best option for estimating inventory disposal, but it usually leads to an increase in income tax. And the weighted average cost method leads to a decrease in profit and an increase in the cost of stocks compared to the FIFO method [9].

Therefore, the management and accounting department of each enterprise independently decide which method to use during the evaluation of production stocks, because the strategy and sphere of activity of the enterprise must also be taken into account. This will make it possible to organize the process of organizing and keeping accounting

more qualitatively and efficiently in accordance with the requests of the management system.

The next individual decision is the selection of an accounting option for production stocks in the accounting department of the enterprise: graded – each type of production stocks is recorded both in kind and in monetary terms, and for this, an analytical accounting card is used; batch – grouping of stocks in a batch is carried out according to nomenclature costs, and information is compiled in monetary and in-kind measures; balance – for periodic reconciliation with the warehouse, accounting employees need to compile warehouse accounting cards.

A separate problematic issue for consideration is the method of accounting for transport and procurement costs. Different opinions on this issue are highlighted in literary sources, but they all boil down to two options:

- direct inclusion of TKV in the initial cost of a unit of purchased stocks (for homogeneous stocks);
- by the average percentage (when summarizing the amount of transport and procurement costs on a separate sub-account with their further distribution).

We agree with N.I. Koval regarding the accounting of transport and procurement costs on account 29 "Transport and procurement costs" [3]. The proposed account will reflect: costs of transportation and loading of materials into vehicles; costs of storage of production stocks; costs for maintaining procurement and storage equipment; fees paid to intermediary organizations through which production stocks were purchased; packaging costs and others [3]. Along with this, it is necessary to decide on analytics. It is appropriate for account 29 "Transport and procurement costs" to open analytical accounts in the section of materials and entities that deliver stocks: 291 "Transport and procurement costs of basic materials"; 292 "Transport and procurement costs of auxiliary materials". With details: carried out by third-party enterprises; carried out by own forces.

There are also a number of provisions, the presence of which is mandatory when forming an accounting policy for the needs of the accounting organization in terms of stocks, namely: a working plan of accounts, which contains synthetic and analytical accounts, for the formation of an accounting system in order to display timely and complete information in accounting and reporting; forms of primary documents used to reflect the facts of economic activity, for which standard forms of documents are not provided for, as well as forms of documents for internal accounting reporting; rules of document circulation and accounting information processing technologies.

The purpose of the analysis of the company's production stocks is to ensure the effective implementation of the production program by minimizing material costs, reducing the volume of production stocks, reducing resource prices and improving their quality. Based on the goal, the main tasks of the analysis of the availability and use of production stocks of the enterprise are [1]:

- assessment of the reality of plans for material and technical supply, the degree of their implementation, the impact on the volume of production, its cost and other indicators of economic activity;
- assessment of the provision of the enterprise with certain types of production stocks;

- assessment of the level of intensity and efficiency of the use of material resources;
- determination of the nature of warehouse stocks, assessment of the movement and structure of consumption of material resources;
- systematization of the factors that led to the deviation of the actual indicators of the use of production stocks from the planned (forecasted);
- modeling of relationships between production volume and material intensity, material yield, other factor indicators:
- identification of intra-production reserves for saving production stocks and assessment of their impact on the volume of activity.

A significant place in the organization of analytical work belongs to the determination of the content and sequence of its individual stages, since the effectiveness of the analysis of economic activity largely depends on the correct organization. That is, to ensure the effectiveness of analytical work, it must be well thought out, planned and organized. Therefore, it is advisable to present the analytical process in the form of a certain sequence of works that are homogeneous in content, which will make it possible to systematize and optimize the methodology, reduce the complexity of analytical procedures and increase effectiveness.

It is worth noting that today the economic literature presents different approaches regarding the number and detailing of the areas of analysis of the production stocks of the enterprise, which indicates the ambiguity of the opinions of scientists. In particular, M.A. Bolyukh, V.Z. Burchevskyi, and M.I. Horbatok distinguish the following three stages of inventory analysis: analysis of the validity and effectiveness of the formation of a portfolio of contracts for the supply of material resources; analysis of effective use of material resources; analysis of the possibilities of mobilizing identified reserves to increase the efficiency of the use of material resources [2].

At the same time, E.V. Mnykh offers a slightly different model of economic analysis of the enterprise's supply of material resources and the efficiency of their use, based on the study of the goals and directions of the analysis of the use of materials, the assessment of internal and external relations of the analysis in management.

Thus, according to the author, the general model of economic analysis of the enterprise's provision of material resources and the efficiency of their use contains eight blocks: analysis of material flow; analysis of the material resources market; analysis of regulations for the regulation of the material resources market; analysis of the indicative plan; general analysis of the volume and structure of material resources; analysis of material consumption of products; analysis of material costs for production; analysis of production and financial results, which are achieved due to the rational use of material resources [4, c. 257]. The given list of areas of analysis of production stocks is characterized by excessive detail. The expediency of distinguishing the directions "Analysis of the material flow" and "Analysis of the indicative plan" is debatable.

Thus, based on the generalization of the considered approaches of scientists and in accordance with the defined tasks of the analysis, it is advisable to distinguish the following stages of the analysis of production stocks (Fig. 1):

- analysis of the enterprise's availability of production stocks;
- analysis of the volume and structure of production stocks of the enterprise;
- analysis and assessment of the efficiency of the use of production stocks;
- analysis of the influence of the efficiency of the use of stocks on the volume of production.

The study of the supply of the enterprise with stocks involves an assessment of the enterprise's general need for production stocks, an analysis of the supply of the need

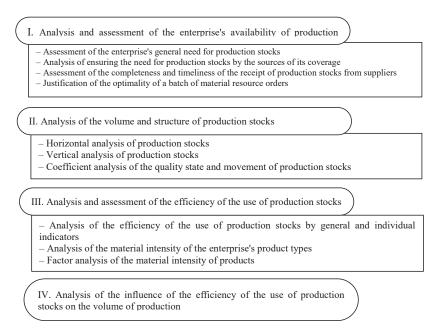


Figure 1 – Directions for the analysis of production stocks

by the sources of its coverage. An important component is the analysis of compliance with the term of delivery of production stocks in accordance with the contract concluded with suppliers. Violation of delivery terms is the cause of non-fulfillment of the production plan and sale of finished products. The first direction of substantiating the optimality of a batch of material resource orders is completed.

When analyzing the volume and structure of production stocks, it is advisable to carry out a horizontal and vertical analysis of production stocks.

When analyzing the supply of production stocks, the quality of the stocks received from suppliers is controlled according to the standards, technical conditions for the relevant stocks. After all, in the case of non-compliance of products with quality standards, this can lead to a violation of material consumption norms, an increase in the cost price of finished products and a decrease in their quality.

The next direction is the analysis of the efficiency of the use of production stocks, which is characterized by the following indicators: profit per monetary unit of material costs; material capacity; material yield, coefficient of ratio of growth rates of production volume and production stocks, coefficient of material utilization [10].

Profit per monetary unit of material costs is the most generalizing indicator of the efficiency of the use of material resources. It is defined as the ratio of the amount of profit from the main activity and the amount of material costs. The material yield of production characterizes the output of products from each monetary unit of spent material resources and is calculated by dividing the cost of manufactured products by the amount of material costs. Material yield characterizes how many products are produced from each monetary unit of consumed material resources (raw materials, materials, fuel, energy).

The material intensity of products is a value indicator that reflects the level of material costs (without depreciation) for each monetary unit of commodity products and is calculated as the ratio of the sum of all material costs to the cost of manufactured products. In the process of analyzing

the material intensity of products, a factor analysis of the specified indicator is carried out. The analysis of the material intensity is carried out in the following order: the general assessment of the material intensity of the products is determined; the change in material intensity is analyzed by individual cost elements; the effect of changing factors on the material intensity of products is determined [6]. The analysis of the material intensity of products makes it possible to find reserves for the reduction of material costs for the production of products and helps to reduce their cost price.

#### **Conclusions**

The formation of accounting and analytical support for the management of production stocks at the enterprise involves the improvement of the organization of their accounting, taking into account that the elements of the accounting policy in terms of stocks can be grouped: those that do not influence the financial results and analytical reporting indicators – this is the definition of the unit of analytical accounting of stocks; and those that have a probable impact on the analytical indicators of reporting and financial results are the methods of assessing the disposal of stocks and the procedure for accounting and distributing transport and procurement costs. Therefore, when forming an administrative document on the accounting policy, it is important to evaluate the advantages and disadvantages of each of the considered elements according to the criterion impact on financial reporting indicators. After all, the accuracy of profit determination and the level of financial condition depend on the organization and accounting of production stocks.

It is worth noting that the use of a systematic method of analysis of production stocks will allow to transparently and reliably display and control the intended use and movement of stocks, to identify potential opportunities for increasing the efficiency of their use. In turn, this will allow to identify reserves for reducing material costs and reducing the cost of production and, accordingly, increasing competitiveness and the overall efficiency of the enterprise's functioning.

### References

- 1. Babenko L.V., Vasylieva V.G., Konovalova O.V. Accounting and analytical support for the management of production stocks. *Economic space*. 2021. No. 166. P. 90–96.
- 2. Bolyukh M.A., Burchevskyi V.Z., Horbatok M.I. Economic analysis: teach. manual Kyiv: KNEU, 2001. 540 p.
- 3. Koval L.V. Inventory accounting policy. *Economics, finance, management: topical issues of science and practice*. 2018. No. 1. P. 101–110. URL:http://socrates.vsau.org/repository/getfile.php/16465.pdf
- 4. Mnykh E.V. Economic analysis of enterprise activity: a textbook. Kyiv: Kyiv national trade and economy University, 2008. 514 p.
- 5. Podmeshalska Yu.V., Seibert E.K. Accounting of production stocks. Electronic scientific publication "Efficient Economy". No. 3. 2018.
- 6. Polishchuk O.M. Accounting and analytical support for the management of production stocks of agrarian enterprises. *Market infrastructure*. 2020. No. 42. P. 367–371.
- 7. Accounting regulations (standard) 9 "Inventories": order of the Ministry of Finance of Ukraine dated 10.20.99 No. 246. URL: http://zakon4.rada.gov.ua/laws/show/z0751-99 (application date 10/26/2023).
- 8. On the approval of Methodological recommendations regarding the company's accounting policy and amendments to some orders of the Ministry of Finance of Ukraine: Order of the Ministry of Finance of Ukraine dated June 27, 2013 No. 635 (with changes and additions made by Order of the Ministry of Finance of Ukraine dated January 14, 2020 No. 6). URL: https://ips.ligazakon.net/document/view/MF13052?an=10 (application date 10/26/2023).
- 9. Tesak O.V. Accounting policy for controlling the availability and use of production stocks. *Entrepreneurship and trade*. Vol. 27. 2020. P. 72–75. URL: http://journals-lute.lviv.ua/index.php/pidpr-torgi/article/view/709/674
- 10. Tomchuk O.F., Rabokon Yu.S. Analysis of the efficiency of the use of stocks at the enterprise. *Finance, accounting, banks*. Vol. 1(24) Vinnitsa, 2019. P. 76–86. URL: https://jfub.donnu.edu.ua/article/view/7407