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PLANNING OF RESOURCE CONSUMPTION INDICATORS

ПЛАНУВАННЯ ПОКАЗНИКІВ ПРОЦЕСУ РЕСУРСОСПОЖИВАННЯ

The article is devoted to the problem of effective management of resource consumption processes at industrial enterprises in the conditions of economic instability and financial crisis. In the course of the research the current state of development of methods and tools of resource management processes of economic entities of Ukraine is considered. The components of the formation of the process of resource consumption management at industrial enterprises are identified and negative trends in the field of resource consumption management are identified. As a result of the study, recommendations for stabilization of resource consumption processes by using all the principles of building complex processes are developed. A qualitatively new approach to planning the level of resource consumption of industrial enterprises as a whole and by stages of its course is formulated.

Keywords: *resources, resource consumption, process, planning, management, industrial enterprises.*

Статтю присвячено проблемі ефективного управління процесами ресурсоспоживання в умовах економічної нестабільності та фінансової кризи. Наголошено, що сучасні промислові підприємства являють собою складні виробничо-ресурсні комплекси, тому раціональна організація управління їх ресурсним потенціалом з метою досягнення ефективності виробництва вимагає використання системного підходу, який передбачає системний розгляд формування витрат ресурсів з моменту їх надходження, можливих змін на етапі виробничого використання та на етапі реалізації готового продукту.

У процесі дослідження встановлено, що на сучасному етапі, процеси ресурсоспоживання характеризуються розбалансованістю і недостатньою ефективністю. Відсутній взаємозв'язок показників використання ресурсів з кінцевими результатами діяльності підприємств, що не дозволяє оцінити та виявити можливі резерви їх впливу на ефективність результатів діяльності. При нормуванні і плануванні використання ресурсів

найменше враховується та особливість, що система, в межах якої об'єктом управління виділяються процеси використання ресурсів, охоплює всю виробничу систему в послідовності плинку виробничої діяльності, починаючи зі «входу» у виробничу систему і закінчуючи її «виходом». Процес управління ресурсоспоживанням не є достатньо впорядкованим, узгодженим і керованим та таким, що має гнучкі параметри управління і будується на прогресивних тенденціях системного підходу. Складові елементи організації та планування рівня ресурсоспоживання не розглядаються як чинники підвищення конкурентоспроможності підприємства. Існуючі ж організаційні резерви підвищення ефективності ресурсоспоживання можна уявити шляхом побудови сумісного інтегрованого потоку ресурсоспоживання та встановлення їх нормативної величини для кожного етапу з послідовним аналізом відповідності умові ефективного використання.

Запропоновано визначення загального показника ресурсоміткості, як умови оптимізації витрат на ресурси, який передбачає не тільки врахування витрат усіх видів ресурсів, що задіяні в виробничо-комерційному циклі, а і врахування ступеня взаємовпливу на нього його складових. Врахування впливу складових показника ресурсоміткості може проводитися за допомогою використання методу кореляційно-регресійного аналізу впливу факторів на загальну ресурсоміткість операційної діяльності.

Впровадження наведених показників у систему управління ресурсоспоживанням дозволить якісно покращити процеси планування, а саме, задавати рівень по ресурсоміткості виробництва на «вході» і у всіх процесах. Користуючись взаємозв'язками між показниками рентабельності продукції і ресурсоміткості, можливо задавати доцільний рівень витрат на всі види ресурсів по кожному підрозділу.

Ключові слова: ресурси, ресурсоспоживання, процес, планування, управління, промислові підприємства.

JEL Classification: L51; M11

Formulation of the problem. Modern industrial enterprises are complex production and resource complexes, so the rational organization of management of their resource potential in order to achieve production efficiency requires a systematic approach, which involves a systematic consideration of the formation of resource costs since their receipt, possible changes at the stage of production and implementation. finished product. The variability of the market situation necessitates, on the one hand, the effective use of available internal resources of the enterprise, on the other – a timely response to changing environmental factors.

Analysis of recent research and publications. The issue of efficient resource consumption has been considered by many economists and scientists around the world. American engineer Harrington Emerson (1853-1931) developed the principles of improving the efficiency not only of production work, but also of any activity. He defined efficiency as the most profitable ratio between the effort expended, money, equipment, etc., and the economic result. "For his contribution to the theory of optimal resource allocation" the 1975 Nobel Prize in Economics was awarded jointly to Leonid Kantorovich (Russia) and T. Talling by C. Kupmans (Netherlands). The problem of resource consumption was given much attention also in the works of economists: S.A. Podolinsky, V.I. Vernadsky, N.M. Fedorovsky, V.I. Danilina, V.M. Portugal, O.O. Orlova, B.Y. Panasyuk, O.V. Baturi, V.M. Geets, B.M. Danilishina. But these authors evaluate the efficiency of resource consumption in enterprises for certain types of resources, without taking into account their interaction and interaction in the production and commercial cycle of production. As a result, resource consumption processes are characterized by imbalance and insufficient efficiency. This motivates research on the main trends that have formed at the local level of economic entities, the relationship of dynamics, composition and volume of production resources with production efficiency, methods of optimizing the processes of their formation and use. These complex issues cannot be solved without appropriate changes in the processes of planning the needs of production resources, finding new approaches to take into account the effects of economic and technological factors, levers and

incentives inherent in a market economy and relevant trends in their use. Therefore, the problem of management and planning of the level of resource consumption becomes especially relevant.

Formulation of the goals of the article (setting objectives). The purpose of the article is to investigate the conditions and processes of planning the economically feasible level of resource consumption at industrial enterprises; identify and formulate approaches to planning, regulation and management of the level of resource consumption, based on the nature of the relationships of the components of the overall resource intensity

Presenting main material. The main task of the management of the enterprise is to ensure the competitiveness of products and increase the market segment, provided the rational use of all resources of the enterprise. This condition requires a balanced management of the consumption of enterprise resources

The first function of the management process is to plan the use of resources, which requires clarification of the features of their implementation in modern conditions. All resources are used in production and commercial cycles together, so their rational use together is a difficult task. It involves establishing the levels of their consumption, directions and terms of use, mode of consumption, interchangeability of resources in mixtures and recipes, combinations of resources in the product, etc. [1, p.395].

In general, resource planning is reflected in the budgets (plans) of expenditures of each division of the enterprise. However, it should be emphasized that if the determination of resource needs by logistics services is mainly based on natural units, and production units – only in physical units, the end result of the use of these resources is reflected in value terms. There are no methodological principles for this transition, and modern economic conditions require taking into account changes in the external environment (markets for raw materials and goods), which significantly affect the cost of resources and products of enterprises.

The market concept of management is based on the fact that management is the activity of an economic entity, in the process of which is the ordering of its structural elements on the basis of market mechanisms for regulating economic processes. Therefore, the activities of the planned employee should be aimed at finding new areas of profitable investment, the implementation of new combinations of resources in production, movement into new markets, the creation of new products, reasonable risk.

For resource consumption plans to be implemented, management must find an effective way to combine them, ie with the optimal result. This task is able to perform the function of management. Its action consists of a number of techniques, methods, their rational combination, parts of the management system and its relationships in time and space. In this sense, the organization of resource management should ensure the creation of the most favorable conditions for all production processes at minimum cost of production resources. The latter is possible by creating a system of structural elements of resource consumption processes, and together they will enable people to work effectively together to achieve their goals. At the same time, this function in the structural units where resources are used is performed unsystematically and does not provide a rational level of provision and use of enterprise resources. This is evidenced by whether the cost of raw materials is higher than planned or the cost of transportation, unprofessional workforce, etc., which is not associated with deteriorating competitiveness of finished products, namely, their quality, rising production costs. That is, the constituent elements of the organization and planning of the level of resource consumption are not considered as factors to increase the competitiveness of the enterprise.

The process of controlling resource consumption is to determine the quality of calculations of resource needs, the reasons for changes in their actual quantity and prices and provide timely recommendations for eliminating deviations. Economic substantiation of expediency of researches on these or those deviations because of a number of restrictions of practical character is not absolutely simple problem. As a result, in practice, there is no single approach to its solution. Enterprises can study absolutely all deviations or study them selectively, and sometimes ignore them altogether. In addition, the function of control (analysis) of the resource consumption process is carried out, firstly, separately for different types of resources, and secondly, does not consider the end-to-end resource consumption process at all stages, starting with the system, but only after its

completion. That is, there are no people responsible for the use of resources both in business processes and in the aggregate. As a result, the end result of business processes, namely, the formation of competitive advantages and competitiveness of products in the process of its production has no control.

This indicates that the existing process of resource management is not sufficiently organized, coordinated and managed and has flexible management parameters and is based on the progressive trends of the systems approach.

The current state of the resource management process, necessitates, on the one hand, the effective use of internal resources available to the company, and, on the other – timely response to changes in environmental factors (changes in financial and credit, tax policy, pricing mechanisms, con market conditions, relationships with suppliers and consumers, etc.). This requires appropriate changes in the tactics and strategy of production resources management on the basis of finding new approaches to improving the mechanism of action of economic factors of significant resource savings and their efficient use.

But in modern science and practice of economic activity of enterprises there are not enough developments on tools for control and regulation of efficient use of production resources. In addition, it should be borne in mind that the problem of formation and use of production resources and the efficiency of production activities are interconnected by a complex system of direct and feedback.

In the course of the research it was found that the approaches to planning the rational use of production resources known in the scientific literature and practical activity of domestic enterprises do not provide solutions to the problems of their efficient use. This is indicated by the fact that in the practice of enterprises resource intensity indicators are not used as a basis for planning and forecasting the economic activity of the enterprise. And in the process of rationing of production resources there is no target orientation. Namely, all the norms and standards of different types of resources have an indirect, weak connection with the final results of enterprises and their efficiency. Indicators for assessing the use of productive resources have different objects of comparison and different units of measurement, and characterize the use of a particular productive resource without taking into account its share in the economic result and the consequences of the impact of interaction with other resources. There is no correlation between the indicators of resource use and the final results of enterprises, which does not allow to assess and identify possible reserves of their impact on the efficiency of performance. There is no single body that is able to carry out appropriate management influences to optimize resource costs in certain periods of time.

The efficiency of resource consumption of any business unit can be said only in the case of achieving the optimal ratio of resources spent and performance. This condition can be met when this important task is solved comprehensively, taking into account the entire technological process of production and the composition and size of the production resources. Consideration of the process of resource consumption as a whole, balanced in time, volume, level of resource provision of all major and ancillary operational and production processes allows to obtain a positive level of income [2, p. 17].

The analysis of resource consumption processes shows that the existing system, within which the object of management is allocated to the processes of resource use, covers the entire production system in the sequence of production activities, but this feature is least taken into account when rationing and planning resource use.

Resource consumption processes cover all stages of use of any type of production resources, starting with the "entrance" into the production system and ending with its "exit" – the sale of products. And the existing organizational reserves for improving the efficiency of resource consumption can be represented by building a joint integrated flow of resource consumption.

In this regard, a comprehensive approach to the management of the processes of use of production resources can be presented as a step-by-step process of establishing their normative value for each stage and subsequent analysis of compliance with the condition of efficient use.

Taking into account and ensuring the consistency will ensure the balance of the entire operational, economic and other components of the technological chain. That is, the work of all its components as a single coordinated mechanism. And management activities should be aimed at

finding areas for profitable investment of resources, the implementation of new combinations of resources in the production process.

The above idea of the structure, features and content of resource consumption processes allows to determine as a planned indicator of resource consumption a comprehensive indicator of resource consumption process, and a complex rate of resource consumption in value terms per unit of output, as a regulated parameter of this process.

These indicators should be determined both for the entire production and commercial cycle as a whole and for individual stages of the resource consumption process (procurement, production, sales). This will allow for resource planning and create conditions for rational resource consumption starting from the "entrance" into the production system.

Given the dynamic variability of market conditions, for the proposed indicators, it is advisable to set limits to their fluctuations. Observance of their limits will guarantee the prevention of economically unfavorable level of use of only all types of resources – material, labor, technical and others involved in certain processes. Therefore, the definition of their cost characteristics is the starting point in relation to the economic regulation of resource consumption.

The use of a focused approach to determining the overall resource intensity, as a condition for optimizing resource costs, involves not only taking into account the costs of all types of resources involved in the production and commercial cycle, but also taking into account the degree of interaction of its components. The impact of the components of the resource intensity indicator can be taken into account by using the method of correlation-regression analysis of the influence of factors on the total resource intensity of operating activities.

Identifying dependencies taking into account the relevant aspects of the variety of solutions to such problems is important because it allows to establish, albeit with some assumptions, the regularity of these changes, the impact of a solution to the problem of resource policy and its impact on efficiency resources [3, p.11].

Taking into account the established correlations, the degree of influence of each type of resources on the total costs of the enterprise is determined, the validity of the norms is analyzed and the consumption indicator is determined. It is these indicators that serve as indicators for planning and monitoring the processes of their use. At the same time, the system of accounting information is improved and the limits of permissible deviations are set. If the latter are exceeded, the amount of costs is promptly adjusted to take into account the amount for each type of resources.

The introduction of these indicators in the resource management system will qualitatively improve the planning process, namely, to set the level of resource intensity of production at the "input" and in all processes. Using the relationship between profitability and resource consumption, it is possible to set the appropriate level of costs for all types of resources for each unit. The expected result of the "output" is proposed to be taken into account when calculating the resource consumption of the "input" taking into account the margin of deviation.

Given that the cost of resources used in the production process refers to different types of costs (direct or indirect), the mechanism of their management can use elements of the direct costing system, namely, allocating resource costs in overhead costs, we can determine a system of balanced ways optimize the use of resources and set an enterprise-wide management indicator (standard) for employees of the management staff who make appropriate decisions.

The new approach to resource consumption planning will create additional opportunities for resource consumption system diagnostic processes. The use of resources for all types should be analyzed by the centers of their formation. The latter means structural units that are relevant to a particular type of resources and are responsible for its rationing, maintain the established cost standards for a long time and form the tactics and strategy of resource consumption.

Conclusions. As can be seen from the above, the problem of rational resource consumption as one of the most important factors in intensifying and improving production efficiency, primarily concerns the formation and functioning of effective resource management. Therefore, the search for new concepts of resource management, focused on the efficient use of productive resources, is a very important issue and requires changes in approaches and improvement of the mechanism of resource consumption planning.

Objectivity of the established planned normative indicators of control of planning and resource consumption process, successful organization of technological processes, analysis of their course should ensure comparability of actual indicators with planned, reporting indicators of previous periods, possibility of automation of these procedures, quality information collection and processing. At the same time, the following requirements should be established for normative planning and evaluation indicators: completeness and objectivity, volume and quality of works that they reflect; assistance in identifying and using internal reserves to increase efficiency and improve the final economic results of production and economic activities of the enterprise; simplicity and convenience for calculation, accounting and analysis; clearly defined physical and cost units.

Analysis of the level of planned and actually achieved indicators should fully reveal the relationship of resources in the production process and their impact on the level of competitiveness of products and take into account environmental factors, changes in the market.

Management of the process of resource consumption in enterprises should be carried out by establishing a total indicator of resource intensity both at the stages of the process and production as a whole. To develop management actions for a comprehensive system of resource consumption should be identified and the factors that affect both individual types of resources and the stages of their use.

The system of planning resource consumption indicators, formed on logistical principles and working on the basis of establishing a reasonable aggregate resource intensity indicator both at the stages of technological process and production in general, will allow to make more informed management decisions, strengthen the role of planning and development of resource policy. effective, economically feasible level of management of enterprises.

The study of literature sources and analysis of the experience of market management of industrial enterprises show that currently researchers pay attention to the need to implement the latest approach to understand the complexity of management problems and identify alternative views on their solution. The essence of this approach is to systematically use all the principles of building complex processes. Under which are understood logically ordered sequences of stages (steps, elements) that convert inputs into outputs [4, p. 16].

Therefore, it makes sense to consider a systematic approach to solving the problem of the level of resource consumption of enterprises as a key area for improving management.

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