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APPROACHES TO MODELING THE USE OF RESOURCES

The main problem of resource allocation - a credibility determination of production costs. The usual practice of cost accounting resources on the production of any product does not give the true picture of the formation of prices, since costs are included in the cost of maintaining the entire infrastructure of the enterprise, including - of those items that are not directly involved in the production process. This leads to an increase in costs and selling prices of products.

Methods of calculating accurate cost of production and ways of its reduction through the implementation of innovative projects based on the simulation of the use of resources in production. The procedure for modernization of production is an innovative technology that obeys its own laws and regularities.

In implementing the innovative project is decided contradictory task: at minimum expenses $F(VR) \rightarrow \min$ for modernization to achieve the maximum reduction in production costs $F(S) \rightarrow \min$.

When building a resource model of the process of production is important to study the process of spending resources to process raw materials from their receipt on the premises to a finished product.

As a result, simulation can be calculated value of the total cost of resources needed to implement the production process. A detailed study of costs of resources (labor, energy, material, etc.) on each technological operation makes it possible to determine the true costs and identify the 'narrow' places of the process, and subsequently, to plan ways to address them.

Manufacturing can be considered as a 'black box' with input into its components and products that go with it.

To determine the amount of resources used at each technological operation is necessary to construct the estimated model of resource consumption for flow of each component. Based on the scheme of the flow formed a database of resources spent on processing each component. Similarly, an input of human resources.

Using the calculation model used to determine the number of labor and energy to process a certain amount of material and analyzes the factors that influence costs and loss of resources. Thus the actual cost of material resources can greatly exceed the normative. This may be due to poor organization of the process, the technical condition of equipment, etc..

As a result of expenditure of resources should build dependencies that reflect the structure of division of labor, material and energy costs and will enable more clearly analyze the state of their costs. Dependencies are built as per the general structure of material, labor and energy resources, and the disclosure of each of the categories of expenses. According to the calculations are based analytical dependences for determining relationships between the cost of resources and technical perfection of technological processes.

Depending on the value of performance indicators defined by the level, scope and goals of the implemented innovation project. The conclusion is drawn about the need to develop measures to reduce production costs and formulates specific tasks necessary to implement innovative projects.

The main purpose of modeling the use of resources is a study of technical, technological and economic solutions to reduce costs and increase competitiveness through the implementation of innovative projects.

Achieving this goal is carried out in several stages:

1. Analysis of the structure of commodity products, building a structure of fixed and variable costs of production. Identification of three major groups of components of cost: labor, energy and material costs.

2. Classification of energy loss of a part of labor, energy and material costs of production with the explanation of engineering and economic factors that influence the cost and competitiveness

3. The study of engineering, economic and organizational issues that affect the dynamics of resource flows and perfection of technical processes and operations.

4. Developing methodologies for evaluating and analytical dependences for determining the relationships between resource consumption and technical perfection of technological processes, filing them in a universal resource model production;

5. Development of feasibility and implementation of innovative projects to reduce cost and increase the competitiveness of enterprise.

Therefore, modeling the use of resources is the basis for a decision on the implementation of any innovative project aimed at reducing production costs and the basis for specific engineering and economic decisions and proposals.

Designed for specific enterprise resource model enables the establishment of reliable data on the costs of all resources for the production unit, which in turn allows to identify expendable space of any technological operation to reduce production costs of the enterprise as a whole.

Resource modeling material, labor and energy costs in physical and value terms with a solution to the problem of resource saving.

Resource modeling determines the potential for lower costs of specific resources, economic, organizational, technological and technical means.

Resource modeling allows the comparison of actual costs of resources necessary expenses actually can detect "narrow" places the technical process and identify measures to reduce production costs. Resource modeling can produce rational assessment of building production process.